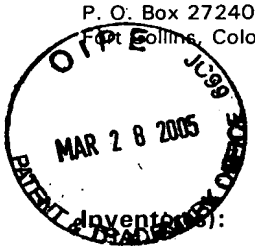
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

3-29-05

PATENT APPLICATION

ATTORNEY DOCKET NO. 10005868-1



IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

AF/3622$

Inventor(s): Marc P. Schuyler

Confirmation No.: 1881

Application No.: 09/703,459

Examiner: Jean D. Janvier

Filing Date: 10/31/2000

Group Art Unit: 3622

Title: METHOD FOR TARGETING PROMOTIONS TO INDIVIDUAL ASSOCIATED WITH A VEHICLE

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 01/27/2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( )	one month	$120.00
( )	two months	$450.00
( )	three months	$1020.00
( )	four months	$1590.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of **$500.00**. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

(X) I certify that this correspondence is being deposited with the U.S. Postal Service "Express Mail to Addressee" service under 37 CFR 1.10, Express Mail No.EV456685713 in an envelope addressed to Mail Stop Appeal Brief-Patent, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on March 28, 2005. **OR**

( ) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number_____ on _____

Number of pages: **19**

Typed Name: **Rachel Carter**

Signature: Rachel Carter

Respectfully submitted,

Marc P. Schuyler

By Ketan S Vakil

Ketan S. Vakil, Esq.

Attorney/Agent for Applicant(s)
Reg. No. **43,215**

Date: **03/28/2005**

Telephone No.: **(949) 253-4953**

OIPE
MAR 2 8 2005
PATENT & TRADEMARK OFFICE

Docket No. HP 10005868-1 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Marc P. Schuyler
Application No.: 09/703,459
Filed: October 31, 2000
For: METHOD FOR TARGETING PROMOTIONS TO INDIVIDUAL ASSOCIATED WITH A VEHICLE

Examiner: Jean D. Janvier
Group Art Unit: 3622

Mail Stop APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF PURSUANT TO 37 CFR §1.192

Appellant appeals the decision of the Examiner finally rejecting all of the claims pending in the present application, namely claims 1-11. Appellant's Notice of Appeal was filed on January 27, 2005. The fee required under 37 CFR §1.17(c) is included with this brief. This brief is transmitted in triplicate.

03/31/2005 AWONDAF1 00000003 082025 09703459
01 FC:1402 500.00 DA

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST 3

II. RELATED APPEALS AND INTERFERENCES 3

III. STATUS OF CLAIMS 3

IV. STATUS OF AMENDMENTS 3

V. SUMMARY OF INVENTION 3

VI. ISSUES 4

VII. GROUPING OF CLAIMS 4

VIII. ARGUMENT 5

REFERENCES CITED BY THE EXAMINER ARE NOT RELATED 5

§103(a) REJECTION OF CLAIMS 1-2, 4-6 AND 8-11 6

A. References Fail to Teach or Suggest All the Claim Limitations 7

B. No Suggestion or Motivation to Combine the References Exists in the Record..... 9

§103(a) REJECTION OF CLAIM 3 11

§103(a) REJECTION OF CLAIM 7 13

IX. APPENDIX OF PENDING CLAIMS 16

I. REAL PARTY IN INTEREST

Hewlett-Packard Company is the real party in interest in the subject application, by virtue of an assignment from the inventor Marc P. Schuyler to Hewlett-Packard Company (recorded on July 9, 2001 at reel 011968, frame 0121).

II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are currently known that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the present appeal.

III. STATUS OF CLAIMS

Claims 1-11 are pending in the application.

Claims 1-11 stand rejected under 35 U.S.C. §103(a). Each rejected claim is being appealed.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection in this matter.

V. SUMMARY OF INVENTION

The present invention is directed to a method of targeting promotions to an individual in a vehicle, where the vehicle includes an on-board system having sensors from which a maintenance event can be detected. The method includes detecting a vehicle maintenance event by digitally interrogating the on-board system and identifying whether the vehicle maintenance condition meets predetermined maintenance criteria. If a maintenance event is detected, an identification of that event is wirelessly transmitted to a remote computer, i.e. at the nearest vehicle dealership. The method includes generating a promotion associated with

the vehicle maintenance event and providing the promotion to the individual associated with the particular vehicle having the maintenance event. To help target the promotion, the dealership receiving the vehicle identification and vehicle maintenance event information stores data of an association between the individual and the particular vehicle (e.g., in a computer database, indexed by vehicle identification number) and uses the vehicle identification to associate the vehicle maintenance event with the individual and routes the promotion to the individual. (See specification, page 3, line 30 to page 4, line 17).

VI. ISSUES

1. Whether claims 1-2, 4-6 and 8-11 are patentable under 35 U.S.C. §103(a) over Mezger et al. in view of Scroggie et al.

2. Whether claim 3 is separately patentable under 35 U.S.C. §103(a) over Mezger et al. in view of Scroggie et al.

3. Whether claim 7 is separately patentable under 35 U.S.C. §103(a) over Mezger et al. in view of Park.

VII. GROUPING OF CLAIMS

1. Claims 1-2, 4-6 and 8-11 stand or fall together under the combination of Mezger et al. and Scroggie et al.

2. Claim 3 stands or falls separately under the combination of Mezger et al. and Scroggie et al.

3. Claim 7 stands or falls separately under the combination of Mezger et al. and Park.

VIII. ARGUMENT

REFERENCES CITED BY THE EXAMINER ARE NOT RELATED

Mezger et al. (U.S. Patent No. 5,781,871, hereinafter "Mezger") relates to vehicle diagnostics. Mezger allows the programming of diagnostic threshold values of a vehicle for more accurate monitoring of the vehicle. (See col. 2, lines 7-12). For an electronic computing unit for a vehicle, it is advantageous if it has a means for subsequently programming in newly established diagnostic threshold values. (See col. 2, lines 44-46). If it is found subsequently that the original diagnostic threshold values are incorrectly set, faulty operation of the control device can be avoided by replacing these diagnostic threshold values. (See col. 2, lines 46-50). Vehicles in which faulty operation has been established can then be called into the workshop for inspection by a corresponding circuit. (See col. 2, lines 38-40).

Scroggie et al. (WO 97/23838, hereinafter "Scroggie") relates to shopping aids and incentives to customers. An important element of Scroggie is that it permits the customer to plan his or her shopping and shopping-related activities more efficiently. (See page 2, lines 16-17). Scroggie is only concerned with a customer selecting a retailer over the Internet, and then having the retailer transmit a purchase incentive offer to the customer. (See page 2, lines 9-13 and page 4, lines 27-30).

Park (U.S. Patent No. 5,627,549, hereinafter "Park") relates to radio broadcasting voice signals. Park focuses on providing detailed information associated with an associated voice advertisement broadcast in voice broadcast 22. (See col. 4, line 67 to col. 5, line 2). That is, when a user hears an advertisement of interest, the user may push an information button 102f to display the advertiser's name, address and phone number. (See col. 6, lines 41-47 and col. 8, lines 34-37). Park is only concerned with displaying the advertiser's name, address and phone number.

The Examiner is improperly combining references that are not related. For example, the Examiner is improperly combining shopping aids and incentives with vehicle diagnostics and radio broadcast voice signals with vehicle diagnostics. The Examiner is improperly using applicant's claims as a roadmap to select random statements from each reference in an attempt to achieve applicant's invention.

§103(a) REJECTION OF CLAIMS 1-2, 4-6 AND 8-11 OVER MEZGER IN VIEW OF SCROGGIE

The Examiner rejected claims 1-2, 4-6 and 8-11 as being unpatentable under 35 U.S.C. §103(a) over Mezger in view of Scroggie.

To establish a prima facie case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. (MPEP §2143; *see In re Thrift*, 298 F.3d 1357, 1363 (Fed. Cir. 2002)). Finally, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. (MPEP §2143 citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

In this instance, the Examiner failed to satisfy at least the first and second criteria for all of the rejected claims.

A. References Fail to Teach or Suggest All the Claim Limitations

Claim 1 recites: "A method of targeting promotions to an individual associated with a vehicle, where the vehicle includes an on-board system including vehicle sensors from which a maintenance event can be detected, the method comprising:

detecting a vehicle maintenance event, including

digitally interrogating the on-board system of the vehicle,

detecting when the vehicle maintenance condition meets predetermined maintenance criteria, and

transmitting wirelessly to a remote computer an identification that the particular vehicle has met the predetermined maintenance criteria;

generating a promotion associated with the vehicle maintenance event; and

providing the promotion to the individual associated with the particular vehicle, including

using an association between the individual and the particular vehicle to associate the vehicle maintenance event with the individual, and

sending the promotion to the individual." (Emphasis Added).

Applicant asserts that the claim limitation "generating a promotion associated with the vehicle maintenance event" is not taught or suggested by any of the references of record. When examining claims for patentability, claims are interpreted as broadly as is reasonable and consistent with the specification. (*See, e.g., In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000)). Therefore, the term "vehicle maintenance event" in claim 1 should be construed to mean "an event that triggers the need for vehicle maintenance." This definition is consistent with the specification, which states, for example, that a vehicle maintenance event may be when oil degradation falls below a predetermined

threshold. (See specification, page 12, lines 3-6). Table I in the specification also provides some examples of vehicles maintenance events. (See specification, pages 17 and 18).

The Examiner admits that Mezger does not expressly disclose "generating a promotion related to the maintenance event or the detection of a faulty operation in vehicle 11." (See page 6 of the Final Office Action). The Examiner admits that Mezger does not expressly disclose "the promotion represents at least one discount coupon, redeemable on the maintenance event or faulty operation, from a local service provider or workshop operator, capable of fixing the faulty operation or defect, servicing a geographic location proximate to the vehicle 11 owner's residence."

The Examiner resorts to Scroggie, alleging that Scroggie discloses "an incentive distribution network or system for providing from a plurality of providers purchase incentive offers, such as electronic coupons, recipes, rebates, shopping aids, product samples, supermarket specials, etc. to qualified customers over the Internet or communications network." (See page 6 of the Final Office Action). Not only is there no suggestion for combining Scroggie with Mezger, even if the combination was proper, the invention of claim 1 is not taught or suggested by the combination.

Scroggie focuses on purchase incentive offers without any reference to a vehicle or a vehicle maintenance event. Scroggie does not contemplate generating purchase incentive offers associated with a vehicle maintenance event. In fact, Scroggie does not even mention vehicle, car, automobile, truck, maintenance or repair. Scroggie is only concerned with a customer selecting a retailer over the Internet, and then having the retailer transmit a purchase incentive offer to the customer. (See Scroggie, page 2, lines 9-13 and page 4, lines 27-30). The customer must select the retailer before receiving the purchase incentive offer. Scroggie requires an action (i.e., a selection) by the customer before a purchase incentive offer is

generated. Scroggie fails to teach or suggest that the purchase incentive offers are generated in response to a vehicle maintenance event as recited in the claims.

By contrast, Applicant's invention automatically and electronically generates a promotion associated with a vehicle maintenance event after detecting a vehicle maintenance event. Once the promotion is generated, the promotion is automatically and electronically sent to the customer (e.g., visually displaying the promotion for the customer in the vehicle — claim 7). The customer does not have to select the retailer to receive a promotion as disclosed in Scroggie. Hence, the Examiner improperly asserts that the deficiency in Mezger is remedied by Scroggie. Mezger and Scroggie, taken individually, or in combination, fail to disclose, teach or suggest all of the limitations of claim 1. Therefore, claim 1 is patentable over the cited references.

B. No Suggestion or Motivation to Combine the References Exists in the Record

The Examiner contends that it would have been obvious to a person of ordinary skill in the art to incorporate the incentive distribution system of Scroggie into the vehicle diagnostic system of Mezger. (See page 10 of the Final Office Action).

To establish a prima facie case of obviousness, the Examiner must, *inter alia*, show some objective teaching in the prior art or that knowledge generally available to a person of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of a person of ordinary skill in the art, or, in some cases the nature of the problem to be solved. *In re Kotzab*, 217 F.3d 1365, 1369, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000).

The Examiner has failed to provide any statement, basis or reasoning in the art to combine the references.

No explicit statement appears in either reference that would teach or suggest to a person of ordinary skill in the art to combine the references. Mezger does not mention "promotion or incentive" but rather specifically focuses on vehicle diagnostics. Mezger is specifically directed to avoiding the erroneous establishment of diagnostic thresholds. (See col. 1, lines 57-59). No statement in Mezger would lead a person of ordinary skill in the art to be concerned with purchase incentive offers. Scroggie, on the other hand, does not mention "vehicle or vehicle maintenance event." Scroggie focuses on Internet retail purchase incentive offers. No statement in Scroggie would lead a person of ordinary skill in the art to be concerned with vehicle diagnostics. Therefore, no statement in either Mezger or Scroggie would lead a person of ordinary skill in the art to make the combination suggested by the Examiner. The combination of these two references is merely one of convenience for the Examiner.

A person of ordinary skill in the art would not combine these references because each reference seeks to solve different unrelated problems. Mezger relates to vehicle diagnostics. Mezger seeks to solve the problem of accurately setting diagnostic threshold values. (See col. 1, lines 31-41). For example, if diagnostic threshold values are set too close together, then improper error messages are sent to the driver. On the other hand, if diagnostic threshold values are set too far apart, then undetected faulty operations can occur. Mezger's invention avoids the erroneous establishment of diagnostic thresholds. (See col. 1, lines 57-59).

Scroggie relates to Internet retail purchase incentive offers. Scroggie seeks to solve the problem of providing retailers with online shopping services. (See page 1, lines 17-23).

Scroggie states that "the full potential of online delivery of incentives has not been realized prior to the present invention." (See page 1, lines 22-23). "Importantly, the incentives are distributed in such a way that they may be redeemed only at a specific retailer selected by each customer." (See page 1, lines 29-30). Furthermore, Scroggie states that "an important element of the invention is that it permits the customer to plan his or her shopping and shopping-related activities more efficiently." (See page 2, lines 16-17). Hence, Mezger and Scroggie each seek to solve different unrelated problems. A person of ordinary skill in the vehicle diagnostics art would not search for solutions in the Internet retail purchase art, nor could the Internet technology be used to perform the functions in a vehicle as recited in the claims. The Examiner has used hindsight to combine these references. Obviousness cannot be established by hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). It is the prior art itself and not applicant's achievement that must establish the obviousness of the combination. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985).

§103(a) REJECTION OF CLAIM 3 OVER MEZGER IN VIEW OF SCROGGIE

The Examiner rejected claim 3 as being unpatentable under 35 U.S.C. §103(a) over Mezger in view of Scroggie.

Claim 3 recites: "A method according to claim 1, wherein generating a promotion includes:

obtaining service discount coupon permissions for a plurality of service providers, across multiple geographies;

filtering the service providers based on type of vehicle maintenance service and geographic vicinity to the individual; and

generating and transmitting at least one coupon to an address associated with the individual in response to the filtering." (Emphasis Added).

Applicant asserts that the claim limitation "filtering the service providers based on type of vehicle maintenance service and geographic vicinity to the individual" is not taught or suggested by any of the references of record.

The Examiner admits that Mezger does not expressly disclose the features recited in claim 3." (See page 6 of the Final Office Action).

The Examiner resorts to Scroggie, alleging that Scroggie discloses "the customer logs into the system and fills out a registration form where he provides his demographic information including geographical location having a specific zip code and other postal code since the features of the present system are location-dependent. If it is determined by the system that the submitted zip code is a valid zip code, that is a zip associated with a retail store where an electronic coupon can be redeemed, then the system allows the customer to proceed to the main menu and browse among available purchase incentive offers." (See pages 6 and 7 of the Final Office Action). Not only is there no suggestion for combining Scroggie with Mezger, even if the combination was proper, the invention of claim 3 is not taught or suggested by the combination.

Claim 3 is directed toward automatically and electronically filtering the service providers based on type of vehicle maintenance service and geographic vicinity to the individual.

Scroggie focuses on a customer logging into a computer, inputting a postal code and retail store selection, and receiving a plurality of incentive offers based on the customer's postal code. (See page 4, lines 3-12). Scroggie does not contemplate filtering the service

providers based on type of vehicle maintenance service. Scroggie is only concerned with the customer selecting the desired retail stores and receiving offers from only these stores. The customer must first select the retail store before viewing the offer. Once the offer is received, the customer may find the offer not relevant to the customer's needs.

By contrast, claim 3 is directed toward automatically filtering the service providers based on the vehicle maintenance service, which has been previously determined. If the service provider cannot offer the service, the service provider is not listed. Therefore, the customer only receives promotions that pertain to the vehicle maintenance service. Scroggie fails to teach or suggest filtering the service providers based on type of vehicle maintenance service and geographic vicinity to the individual as recited in claim 3. Hence, the Examiner improperly asserts that the deficiency in Mezger is remedied by Scroggie. Mezger and Scroggie, taken individually, or in combination, fail to disclose, teach or suggest all of the limitations of claim 3. Therefore, claim 3 is patentable over the cited references.

§103(a) REJECTION OF CLAIM 7 OVER MEZGER IN VIEW OF PARK

The Examiner rejected claim 7 as being unpatentable under 35 U.S.C. §103(a) over Mezger in view of Park.

Claim 7 recites: "A method according to claim 1, wherein:

the vehicle has an on-board computer system and a vehicle user display screen; and

sending the promotion to the individual includes sending an electronic message to the on-board computer system for the vehicle which causes the computer system to visually display the promotion for the user." (Emphasis Added).

Applicant asserts that the claim limitation "visually display the promotion for the user" is not taught or suggested by any of the references of record.

The Examiner admits that Mezger does not expressly disclose "the presence of a screen or display coupled to the vehicle's 11 onboard computer system 20 for displaying a transmitted promotion or advertisement to the individual or the driver of the vehicle 11." (See page 12 of the Final Office Action).

The Examiner resorts to Park, alleging that Park discloses "a system wherein a user or operator of mobile vehicles 10 can interact with an advertisement or promotional message aired and transmitted by pressing the where button 102(f) in the front panel of information device 40." (See pages 12 and 13 of the Final Office Action). Not only is there no suggestion for combining Park with Mezger, even if the combination was proper, the invention of claim 7 is not taught or suggested by the combination.

Park focuses on providing detailed information associated with an associated voice advertisement broadcast in voice broadcast 22. (See col. 4, line 67 to col. 5, line 2). That is, when a user hears an advertisement of interest, the user may push an information button 102f to display the advertiser's name, address and phone number. (See col. 6, lines 41-47 and col. 8, lines 34-37). Park does not contemplate visually displaying the promotion associated with the vehicle maintenance event. Park does not display the promotion but rather is only concerned with displaying the advertiser's name, address and phone number. Furthermore, Park does not automatically visually display the promotion but rather requires the user to push an information button 102f to activate the display. Park fails to teach or suggest that the promotion associated with the vehicle maintenance event is visually displayed for the user as recited in claim 7. The Examiner improperly asserts that the deficiency in Mezger is remedied by Park. Mezger and Park, taken individually, or in combination, fail to disclose, teach or suggest all of the limitations of claim 7. Therefore, claim 7 is patentable over the cited references.

The Examiner fails to establish a prima facie case of obviousness for any of the rejected claims 1-11. This appeal should be granted and claims 1-11 should be allowed.

Respectfully submitted,

SNELL & WILMER L.L.P.

Dated: March 28, 2005

Ketan S. Vakil
Reg. No. 43,215
Attorneys for Appellant(s)
1920 Main Street, Suite 1200
Irvine, CA 92614
Phone: 949-253-4905
Fax: 949-955-2507

APPENDIX OF PENDING CLAIMS ON APPEAL

1. A method of targeting promotions to an individual associated with a vehicle, where the vehicle includes an on-board system including vehicle sensors from which a maintenance event can be detected, said method comprising:

detecting a vehicle maintenance event, including

digitally interrogating the on-board system of the vehicle,

detecting when the vehicle maintenance condition meets predetermined maintenance criteria, and

transmitting wirelessly to a remote computer an identification that the particular vehicle has met the predetermined maintenance criteria;

generating a promotion associated with the vehicle maintenance event; and

providing the promotion to the individual associated with the particular vehicle, including

using an association between the individual and the particular vehicle to associate the vehicle maintenance event with the individual, and

sending the promotion to the individual.

2. A method according to claim 1, wherein:

interrogating the on-board system includes providing a vehicle having an on-board digital system having instructions stored therein operative to cause the digital system to unsolicitedly detect occurrence of the maintenance event; and

said instructions further cause the on-board digital system and a wireless transmitter associated with the vehicle to unsolicitedly contact the remote computer and send the identification to the computer.

3. A method according to claim 1, wherein generating a promotion includes:

obtaining service discount coupon permissions for a plurality of service providers, across multiple geographies;

filtering the service providers based on type of vehicle maintenance service and geographic vicinity to the individual; and

generating and transmitting at least one coupon to an address associated with the individual in response to the filtering.

4. A method according to claim 1, wherein generating a promotion includes:

generating a discount coupon for a product that is complimentary to the vehicle maintenance event; and

transmitting the coupon to an address associated with the individual.

5. A method according to claim 1, wherein generating a promotion includes:

generating a discount coupon for a service that is complimentary to a service for the vehicle maintenance event; and

transmitting the coupon to an address associated with the individual.

6. A method according to claim 1, wherein:

transmitting to a remote computer includes transmitting the identification to a delegee of a vehicle manufacturer or dealer; and

generating a promotion includes use of the identification by the delegee to generate a notification that a particular vehicle maintenance event has been reached, and mailing that notification to the individual pursuant to a vehicle sales promotion.

7. A method according to claim 1, wherein:

the vehicle has an on-board computer system and a vehicle user display screen; and

sending the promotion to the individual includes sending an electronic message to the on-board computer system for the vehicle which causes the computer system to visually display the promotion for the user.

8. A method according to claim 1, wherein:

using an association includes storing contact information for the individual, including an email address associated with the individual; and

sending the promotion to the individual includes sending an electronic message to the user's email address.

9. A method according to claim 1, wherein generating a promotion includes:

generating a discount coupon for a product that is complimentary to a service for the vehicle maintenance event; and

transmitting the coupon to an address associated with the individual.

10. A method according to claim 1, wherein using an association includes:

collecting, at the time of vehicle purchase, a contact address for a vehicle purchaser, and storing the contact address in an electronic database.

11. A method according to claim l, wherein using the association includes:

storing a vehicle identification number on-board the vehicle;

upon detection of a maintenance event, transmitting the vehicle identification number together with the identification sent to the remote computer; and

associating contact information for the individual with a particular maintenance event using the vehicle identification number.

414082

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 17/60

A1

(11) International Publication Number: WO 97/23838

(43) International Publication Date: 3 July 1997 (03.07.97)

(21) International Application Number: PCT/US96/20497

(22) International Filing Date: 23 December 1996 (23.12.96)

(30) Priority Data:

009,244	26 December 1995 (26.12.95)	US
622,685	26 March 1996 (26.03.96)	US

(60) Parent Applications or Grants

(63) Related by Continuation

US 622,685 (CIP)
Filed on 26 March 1996 (26.03.96)
US 009,244 (CIP)
Filed on 26 December 1995 (26.12.95)

(71) Applicant *(for all designated States except US)*: CATALINA MARKETING INTERNATIONAL, INC. [US/US]; 11300 Ninth Street North, St. Petersburg, FL 33716 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: SCROGGIE, Michael, C. [US/US]; 21 Paradise Dove, Laguna Niguel, CA 92677 (US). KACABA, Michael, E. [US/US]; 302 Ashland Avenue #302, Santa Monica, CA 90405 (US). ROCHON, David, A. [US/US]; 4 By Road, Darien, CT 06820 (US). DIAMOND, David, M. [US/US]; 25 Coulter Avenue, Pawling, NY 12564 (US).

(74) Agents: BERG, Richard, P. et al.; Ladas & Parry, Suite 2100, 5670 Wilshire Boulevard, Los Angeles, CA 90036 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

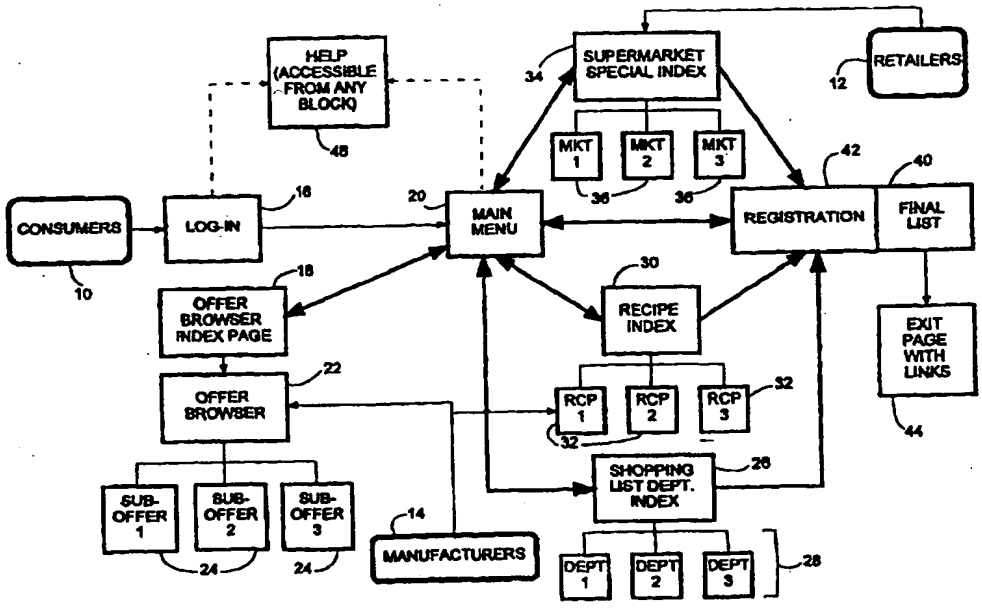
Published

With international search report.

(54) Title: SYSTEM AND METHOD FOR PROVIDING SHOPPING AIDS AND INCENTIVES TO CUSTOMERS THROUGH A COMPUTER NETWORK

(57) Abstract

A system and method for delivering purchasing incentives and a variety of other retail shopping aids through a computer network, such as by E-mail over the Interne or the World Wide Web. Customers (10) of retail stores can establish a bi-directional communication link with the system, log in (16) to the system, and then elect to browse among available purchasing incentive offers (18, 22), or elect to explore other shopping aids, such as a shopping list generator (26), a recipe center (30), or simply elect to claim a product rebate or to receive product information. The system merges customer-supplied information (270) with other purchase incentive data (272) and creates a printable graphical image of the purchasing incentive (282) for transmission to the customer. In an alternate embodiment of the invention, the purchase incentive is not transmitted directly to the customer. Instead, the terms of the incentive are transmitted electronically to the retail store (310) designated by the customer, who receives either a token (316) to present at the store or an advisory message. In yet another embodiment of the invention, incentives may be targeted to specific consumers based on a consumer purchase history (502), and transmitted to consumers' computers (510) using electronic mail addresses stored in a consumer database (506), or using a "personal page" in the computer network, established for each consenting consumer.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	**GB**	United Kingdom	**MW**	Malawi
AT	Austria	**GE**	Georgia	**MX**	Mexico
AU	Australia	**GN**	Guinea	**NE**	Niger
BB	Barbados	**GR**	Greece	**NL**	Netherlands
BE	Belgium	**HU**	Hungary	**NO**	Norway
BF	Burkina Faso	**IE**	Ireland	**NZ**	New Zealand
BG	Bulgaria	**IT**	Italy	**PL**	Poland
BJ	Benin	**JP**	Japan	**PT**	Portugal
BR	Brazil	**KE**	Kenya	**RO**	Romania
BY	Belarus	**KG**	Kyrgystan	**RU**	Russian Federation
CA	Canada	**KP**	Democratic People's Republic of Korea	**SD**	Sudan
CF	Central African Republic			**SE**	Sweden
CG	Congo	**KR**	Republic of Korea	**SG**	Singapore
CH	Switzerland	**KZ**	Kazakhstan	**SI**	Slovenia
CI	Côte d'Ivoire	**LI**	Liechtenstein	**SK**	Slovakia
CM	Cameroon	**LK**	Sri Lanka	**SN**	Senegal
CN	China	**LR**	Liberia	**SZ**	Swaziland
CS	Czechoslovakia	**LT**	Lithuania	**TD**	Chad
CZ	Czech Republic	**LU**	Luxembourg	**TG**	Togo
DE	Germany	**LV**	Latvia	**TJ**	Tajikistan
DK	Denmark	**MC**	Monaco	**TT**	Trinidad and Tobago
EE	Estonia	**MD**	Republic of Moldova	**UA**	Ukraine
ES	Spain	**MG**	Madagascar	**UG**	Uganda
FI	Finland	**ML**	Mali	**US**	United States of America
FR	France	**MN**	Mongolia	**UZ**	Uzbekistan
GA	Gabon	**MR**	Mauritania	**VN**	Viet Nam

SYSTEM AND METHOD FOR PROVIDING SHOPPING AIDS AND INCENTIVES TO CUSTOMERS THROUGH A COMPUTER NETWORK

BACKGROUND OF THE INVENTION

This invention relates generally to systems for providing incentives to customers to shop in retail stores and, more particularly, to systems for delivering customer incentives and other shopping aids via a computer network. Various approaches have been widely used to deliver purchasing incentives, usually in the form of printed discount coupons, to customers of retail stores. Coupons have been distributed to customers by mail, either in a random manner or in a more demographically focused manner. Coupons have also been delivered to customers in retail stores, either from kiosks or at the check-out stand in response to the customer's purchase of some preselected item or items. The latter technique is well documented in prior patents assigned to the same assignee as the present application; e.g., U.S. Pat. No. 4,723,212, "Method and Apparatus for Dispensing Discount Coupons."

In recent years, an increasing number of retail store customers also own personal computers and, of these, many have access to computer network services that provide connections to the Internet and the World Wide Web. Although some computer sites connected to the World Wide Web have begun to offer "online" shopping services, and some services have proposed to deliver discount coupons through a computer network, the full potential of online delivery of incentives has not been realized prior to the present invention.

SUMMARY OF THE INVENTION

The present invention resides in a system and method for the distribution, via a computer network, of incentives and other related shopping aids useful to retail customers. Importantly, the incentives are distributed in such a way that they may be redeemed only at a specific retailer selected by each customer.

Briefly, and in general terms, the method of the invention comprises a sequence of steps performed at a central site in cooperation with a communication device at a customer site. The steps include logging in a remotely located customer using identity data and geographic region data transmitted by the customer over a communication network; transmitting back to the registered customer a plurality of incentive offers, the incentive offers being exercisable in the customer's geographic region; and then receiving incentive offer selection data from the customer over the communication network, the offer selection data including the designation of a retailer at which selected offer or offers may be exercised. In response to the customer selection data, the method performs the steps of generating a purchasing incentive containing (in encoded form) the identity of the retailer designated by the customer and the identity of the customer; and transmitting at least one incentive to the customer over the communication network, for subsequent printing by the customer. For security reasons, the transmitted incentive may be encoded with the identity of the retailer selected by the customer, and preferably also contains a customer identification code.

An important element of the invention is that it permits the customer to plan his or her shopping and shopping-related activities more efficiently. To this end, the method also includes the step of communicating with the customer concerning the use of shopping aids other than incentives or coupons. In one aspect of the invention, this communicating step includes transmitting a list of products available for purchase, receiving customer selections from the list of products, and then transmitting a shopping list to the customer. Thus the customer may browse through a list or index of available products, preferably organized by store department, and then make selections by marking appropriate entries on a computer screen, such as by positioning a mouse pointer on the desired items and clicking a mouse button.

Another aspect of the invention includes the steps of transmitting meal planning information, including a list of recipes, to the customer, receiving a customer selection of one or more recipe, transmitting back to the customer a shopping list that includes ingredient products needed in each selected recipe, and possibly transmitting to the customer at least one purchase incentive pertaining to an ingredient product used in

a selected recipe. While shopping for products with purchasing incentive offers, or while preparing a shopping list, the customer may also use this feature to obtain the details of any recipe that is found to be of interest. The system of the invention transmits the recipe in two separate portions: (a) a complete copy of the recipe in traditional format, including a list of ingredients, and preparation and serving instructions, and (b) the list of ingredients in shopping list form, which the customer may take to the store. The latter portion of the recipe is added to the customer's shopping list automatically and the system transmits a purchase incentive or coupon if an incentive offer is associated with any of the recipe ingredients. The system also provides other meal planning information such as meal calorie and fat content, vegetarian meal ideas and recipes, recipes for meals that can be prepared in under thirty minutes, and so forth.

The purchasing incentive offers in the presently preferred embodiment of the invention are derived from two sources: product manufacturers and retailers. The manufacturers' incentives are presented to the customer in the form of a convenient index that the customer can browse through and select from. Similarly, retail supermarkets provide the source of another set of special offers, organized by store.

Another important aspect of the invention is the manner in which incentives or coupons are generated in the system of the invention. Specifically the step of generating a purchase incentive includes converting numeric and textual information provided by the customer to graphical form; converting other numeric and textual information to graphical form; and merging the converted information with other graphical information defining the incentive, to form a composite graphical incentive image for transmission to the customer.

In one embodiment of the invention the step of transmitting at least one incentive includes transmitting only an advisory message to the customer, and transmitting the terms of the incentive directly to the retail store selected by the customer, for use by the customer on a subsequent visit to the store. In a related embodiment, the step of transmitting at least one incentive includes transmitting only an incentive token to the customer, and transmitting the terms of the incentive directly to the retail store selected by the customer, for use by the customer, who brings the token

to the store on a subsequent visit, and receives the discount or other benefit defined by the incentive offer.

The invention may also be defined in terms of a method for distributing purchasing incentives and other shopping aids to customers over a communication network, the method comprising the steps of: (1) registering as a customer by providing at least an individual identification, a postal region code, and retail store selection; (2) transmitting from a central site and receiving at a remote customer site, a plurality of incentive offers, each of which is exercisable based on the customer's postal region; (3) selecting at the customer site one or more of the incentive offers and transmitting these selections back to the central site; (4) generating at least one purchasing incentive containing in encoded form the identity of the retail store selected by the customer and the identity of the customer; and (5) transmitting at least one incentive to the customer.

The invention may also be defined in terms of a system for distributing purchasing incentives to retail customers, the system comprising a communication network establishing bi-directional communication between a central site and each of a plurality of customer devices; a file at the central site containing a plurality of incentive offers; and a computer located at the central site, for coordinating bi-directional communication with the customers over the communication network. The computer at the central site includes means for registering customer information at the central site, based on information transmitted from any of the customer devices to the central site computer, over the communication network, the customer information including geographical region data and identification data; means for retrieving incentive offers from the file of incentive offers, based on the customer's geographical region, and transmitting the retrieved offers to the customer over the communication network; means for receiving customer selections made from the incentive offers transmitted to the customer, and for receiving a customer designation of a retailer at which the selected incentives are to be exercised; means for generating at least one purchasing incentive containing in encoded form the identity of the retailer designated by the customer and the identity of the customer; and means for transmitting the generated purchasing incentive to the customer over the communication network.

More specifically, the system further comprises another file at the central site containing a list of products available for purchase; and the computer at the central site further includes means, responsive to a customer request, for transmitting the list of products to the customer, receiving customer selections from the list, and transmitting a shopping list back to the customer. The system may further comprise another file at the central site containing meal planning information available for customer use; and the computer at the central site further includes means, responsive to a customer request, for transmitting meal planning information including a list of recipes to the customer, receiving customer selections from the list, and transmitting complete recipes back to the customer, together with an ingredients shopping list and any associated purchasing incentives.

In the disclosed embodiment of the invention, the means for retrieving incentive offers and transmitting them to the customer includes a manufacturer offer file containing purchasing incentive offers currently proposed by manufacturers of products for sale to customers, and also includes a retailer offer file containing purchasing incentive offers currently proposed by retailers of products for sale to customers.

In one form of the invention, the generated purchasing incentive is transmitted to the customer in the form of an advisory message only, and the computer further includes means for transmitting the terms of a purchasing incentive directly to the retail store designated by the customer, who may then exercise the incentive upon visiting the designated store. In a related form of the invention, the generated purchasing incentive is transmitted to the customer in the form of an encoded token, and the computer further includes means for transmitting the terms of the purchasing incentive directly to the retail store designated by the customer, who may then exercise the incentive upon visiting the designated store and presenting the token.

Implementation of the invention in the form of a network site, such as a World Wide Web site, represents a significant departure from prior, conventional uses of Web sites for commercial purposes. Instead of being administered by or for a single commercial entity, the Web site through which customers communicate in accordance with the present invention is a cooperative site involving both retailers and

manufacturers, to provide customers with a variety of information, planning aids, and shopping incentives from multiple sources.

A difficulty with conventional incentive distribution methods is that different retail marketing areas have different weekly cycles on which incentives and discounts are based. In one area, retailers may advertise weekly specials beginning on Thursdays in preparation for weekend buying, while in another area they may advertise weekly specials in a Sunday newspaper supplement. Manufacturers may offer special deals that are completely unsynchronized with these local retailer cycles, based, for example, on a calendar week starting on some other day. In the cooperative site on which the present invention is implemented, all the advertised incentives, whether coming from retailers or manufacturers, can be timed to comply with the advertising cycle of the local retail region.

Another aspect of the invention allows the customer to receive more focused incentives if he or she elects to supply a customer identifying number (customer id.) normally used in the purchase of items at the retail store. The customer id. may be a check-cashing card number or other customer loyalty card number, or may be some other form of identification used to pay for purchases. Because the store can track the purchasing history of each customer who consistently uses the same customer id. when paying for the purchases, a customer who supplies this customer id. to the on-line system of the present invention may then receive more targeted incentives based on his or her prior purchasing history. For example, the customer may receive an incentive for his or her favorite brand of toothpaste, based on a prior purchase of the same toothpaste some weeks earlier. If the customer elects not to provide the customer id. to the on-line system, these more targeted incentives will not be available to that customer.

It will be appreciated from the foregoing summary that the present invention represents a significant advance in the field of retail marketing using computer networks. In particular, the system of the invention provides a highly secure incentive distribution scheme because each incentive or coupon may identify the retailer at which the coupon may be used, and also preferably identifies the customer to whom the coupon was issued. The invention also provides a variety of other planning aids to customers

using computers before visiting a supermarket. These aids include the generation of a shopping list for the customer, the distribution of selected recipes, together with ingredients lists and incentives, if any are available for the ingredients, and the distribution of product information or rebate forms. Other aspects and advantages of the invention will become apparent from the following more detailed description, taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a an overall process flow diagram of the system of the invention;

FIG. 2 is a flow diagram of the log-in process used by a customer in accordance with the invention;

FIG. 3 is a flow diagram of a restriction process used to restrict access to only authorized customers in a selected geographic region;

FIG. 4 is a flow diagram of the main menu process of the system of the invention;

FIG. 5 is a flow diagram of an offer browser process used in the system of the present invention;

FIG. 6 is a flow diagram of a supermarket specials process used in the system of the present invention;

FIG. 7 is a flow diagram of a recipe center process used in the system of the present invention;

FIG. 8 is a flow diagram of a shopping list maker used in the system of the present invention;

FIG. 9 is a flow diagram of a registration process used in the system of the present invention;

FIG. 10 is a flow diagram of a final list process used in the system of the present invention;

FIG. 11 is a pictorial view of a coupon for purposes of explaining how

its components are merged dynamically for transmission to the customer;

FIG. 12 is a flow diagram of the process of dynamic coupon creation used in the system of the present invention;

FIG. 13 is a simplified block diagram depicting an alternate embodiment of the invention in which coupons are not distributed directly to customers;

FIG. 14 is a simplified block diagram depicting another aspect of the invention, in which customer id. information volunteered by the on-line customer is used to generate more focused purchase incentives to be transmitted to the customer;

FIG. 15 is a simplified block diagram depicting another aspect of the invention, whereby targeted and untargeted incentives are delivered to consumers by electronic mail;

FIG. 16 is a simplified block diagram showing how data is gathered and updated for us in a consumer personal page;

FIG. 17 is a simplified block diagram showing how a consumer personal page is automatically updated based on consumer purchasing activity; and

FIG. 18 is a simplified block diagram depicting another alternate embodiment of the invention, in which a token is generated instead of a coupon, and the token is presented at a store in order to obtain a cash discount voucher.

DESCRIPTION OF THE PREFERRED EMBODIMENT

As shown in the drawings for purposes of illustration, the present invention pertains to a system for the distribution of shopper incentives and related shopping aids by means of a computer network to which customers have access at remote locations, such as in their homes.

Overview:

FIG. 1 provides an overview flow diagram of the system of the invention. The system provides a unique communication network connecting consumers, indicated at block 10, retailers 12 and manufacturers 14. The consumers 10 log in and fulfill log-

in requirements as indicated in block 16, and may then proceed to a main menu 20. From the main menu 20, a consumer may elect to go to an offer browser index page 18, which is linked to an offer browser 22. The offer browser 22 has associated sub-offers 24 available for consumer selection. Basically, the offer browser 22 receives offer data from the manufacturers 14 on a periodic basis, and displays the offers to consumers 10 who have logged in to the system. The offer and sub-offer structure permits consumers to select coupon offers, rebate offers, or information offers made available by the manufacturers. Selected offers are accumulated in a session record maintained for the time that each consumer is logged in to the system.

From the main menu 20, a consumer may also elect to go to a shopping list 26, under which store departments 28 provide lists of products for sale. The consumer may mark any items for entry on a shopping list to be printed later. The consumer may also elect to go from the main menu to a recipe index 30, which provides a linkage to previously stored recipes 32. In response to consumer selection of a recipe 32, the ingredients are automatically entered into the consumer's final shopping list, and any coupon offers or rebate offers associated with any of the ingredients are also automatically included in the final list to be transmitted to the consumer. A consumer may also elect to go from the main menu 20 to a supermarket special index 34, which has linkages to previously stored supermarket special offers 36. These have been entered and periodically updated by the retailers 12. Again, any selected items are automatically entered into the consumer's final shopping list.

When the consumer has finished selecting from the offer browser 22, the shopping list index 26, the recipe index 30 and the supermarket special index 34, he or she may elect to go the final list 40. Prior to generation of the final list, the consumer will be required to enter a valid Internet address for electronic mail (E-mail), and to select a supermarket in his or her area, as indicated in block 42. Once the final list has been generated, the consumer may elect to leave the system through an exit page 44, which may have links to other areas of the system. As also shown in FIG. 1, the consumer may also elect to go to a help page 46, which is accessible from any of the other principal blocks shown in the overview, as indicated by the connections to the main

menu 20 and the log-in block 16. The functions described briefly in this overview should become clearer as each is discussed below in more detail.

The Log-in Page:

On first accessing the system of the invention, the consumer encounters the Log-in page, which provides a starting point for each online session. The Log-in page contains a log-in process, as indicated in the flowchart of FIG. 2. A log-in page is presented to the consumer, as indicated in block 80, and the consumer completes an on-screen form and presses (clicks on) a "submit" key, as indicated in block 82. There may be other on-screen buttons available to the user, such as a "help" button 84 and a button 86 to select that E-Mail be sent to the system administrator. At Log-in time, the user is required to enter his or her ZIP code or other postal code, since many of the features of the system are location-dependent. If the postal code entry is determined to be invalid, in block 90, a rejection message is posted on the user's screen, as indicated at 92. If the entry is valid, a restriction process 94 may be performed, then the session is started, as indicated at 96, and the system proceeds to present the main menu to the user, as indicated in block 98.

The restriction process 94 is shown in more detail in FIG. 3. The ZIP or postal code is passed to the process from a calling program, such as the Log-in program, as indicated in block 100. Then the ZIP or postal code is checked for validity, in block 102. Initially, the system may not be in operation in all postal codes, and this validity check restricts access to those consumers with appropriate postal codes. Moreover, not all ZIP or postal codes are necessarily valid or in use. In addition, the ZIP code determines what offers are transmitted to consumers, based on the market areas they reside in. If the postal code is invalid, a rejection message is transmitted to the user, as indicated in block 104.

Optionally, the restriction process also checks the Internet address of the user, referred to as the Internet Protocol (or IP) address, as indicated in block 106. If the IP address is not acceptable, a rejection notice is transmitted to the user, as indicated in block 108. If the IP address is found to be valid, return is made to the calling Log-in

program to complete the restriction process, as indicated at 110. Another possibility occurs when there is some doubt, but not certainty, concerning the user's IP address. A trace route is optionally performed on the user's IP address, as indicated in block 112, and the validity is checked once more, as indicated in block 114. If the IP address is this time found to be valid, an IP address table of valid addresses is updated, as shown in block 116, before exiting the process. If the block 114 finds the IP address still invalid, an advisory message is sent to the system administrator, as indicated in block 118, before updating the valid IP address table and exiting the process.

A "help" page is accessible from the Log-in page and from other pages in the system. Its purpose is provide a high-level flowchart to the user, together with associated narrative information, to explain the major functions of the system and how they interrelate in a single session. The "help" page also provides the benefits of the system and functions as an enticement for the user to register.

The Main Menu:

As one might expect, the main menu provides the user with a central page from which all the major functions of the system can be reached. As shown in FIG. 4, the main menu is entered from the Log-in page, indicated at block 120, and provides a main menu and offer index, as indicated in block 122. The main menu screen gives the user at least eight different functions that are selected by pointing and clicking on an appropriate button or icon. The functions include:

- Select the recipe center (block 124),
- Select supermarket specials (block 126),
- Select help (block 128),
- Select E-Mail to the system administrator (block 130),
- Select the shopping list maker (block 132),
- Select an offer from an index of offers (block 134),
- Select going to an offer browser (block 136), and
- Select final list processing (block 138).

The final list is a composite of all prior activities of the user during the

current online session. In the offer browser, the user may select an offer from a matrix of offers (the offer index), and the selected offer is then added to the final list for this session. In the shopping list maker, the user selects specific items that he or she intends to purchase during the next store visit. These items are added to the final list. The recipe center allows the user to select one or more recipes from an offered list. The ingredients needed in the recipes are also added to the final list. The supermarket specials button allows the user to choose any of a number of advertised specials and add these to the final list.

Offer Browser:

The offer browser contains advertised offers submitted by product manufacturers. As shown in FIG. 5, the offer browser is entered from the main menu, via block 140, and opens with an individual offer page 142. The offer page contains details of an offer, along with a number of control buttons. The user may select prior or next offers, as indicated in block 144, or may select a coupon based on the offer, as indicated in block 145, the coupon being added to the session record as indicated in block 147. Each offer may have a number of sub-offer options associated with it, including:

- adding the coupon to the final list,
- entering a sweepstakes competition automatically,
- displaying a rebate form, for completion and adding to the final list,
- displaying information about the product involved in the offer,
- mailing information about the product involved in the offer,
- playing an audio message related to the offer,
- mailing a sample of the product involved in the offer,
- displaying a recipe associated with the product involved in the offer, and
- presenting a questionnaire associated with the offer.

Offers can be "clipped" by the user only once per session, and validity checking ensures that each offer enters the session file, and final list, only once. FIG. 5 shows the principal functions that may be performed in the offer browser, including:

a help button 46', a view supermarket specials button 146, a view recipe center button 148, a view shopping list maker 150, a return to main menu button 152, and a button 154 to select a sample, mailed information or sweepstakes entry. The latter button initiates generation of a report containing the customer information and is sent to a fulfillment center, as indicated in blocks 156 and 158. Other options shown in FIG. 5 include a link to recipe button 160, actuation of which results in creation of a recipe page (block 162), which is sent to the user or customer (block 164), and also results in the recipe and coupons being added the final list (block 166). Another function is to link to the display of additional offer or product information, as indicated in blocks 168 and 170. Also shown is a link to obtain a rebate (blocks 172, 174 and 176), a link to select audio information (blocks 178 and 180) and a link to the final list 181. Finally, there is a link 182 to a questionnaire that the consumer may complete, and an associated link 183 to an order offer.

Supermarket Specials:

Another main menu function is to provide linkage to a supermarket specials page. Information for this page is provided by participating supermarket retailers and is limited by supermarket shopping area determined from the user's ZIP or postal code.

As shown in FIG. 6, a user of this feature first enters a supermarket special directory page 184, i.e. a directory of supermarkets in his or her shopping area. The user selects a supermarket, as indicated in block 185, and then may select items included in the current list of special offers by the selected supermarket, as indicated in block 186. Each selected item is added to the session record and, subsequently, to the final list, as shown in block 188, and then the process returns to the main menu, as indicated in block 190. If the user elects not to take advantage of any of the supermarket specials, the user has the option to exit to other functions in the system, as shown in blocks 192, 194, 196, 198 and 199.

Recipe Center:

FIG. 7 shows the recipe center functions, which are displayed when the user enters the recipe center from the main menu or elsewhere, as indicated in block 200. The user in this page may elect to go to the recipe page (block 202) and clip a recipe from the displayed list of recipes (block 204). A selected ("clipped") recipe will be added to the information in the session record (block 206), for eventual inclusion in the final list, and then recipe center process is terminated by a return to the main menu (block 208). If no recipe is selected, the user may exit the recipe center as shown in blocks 210, 212, 214 and 216. Each recipe page section contains recipe ingredients and instructions, as well as coupon offers for various ingredients or recipe mixes. When the recipe is added to the final list, the associated coupons are also included.

Shopping List Maker:

The shopping list maker is entered, as indicated in block 220, from the main menu, or from any of various other screens. The user may select a store department (block 222), such as meat, produce, and so forth, then select from displayed items sold in that department, as indicated in block 224. The selected items are added to the session record, as indicated in block 226, before a return is made to the main menu, as indicated in block 228. Items may be selected for adding to the shopping list whether or not any of the items is subject to a manufacturers' or supermarket special offer. Optionally, manufacturer and retailer offers may be displayed in the appropriate sections to alert the user of specials available.

Household Registration:

A more specific registration procedure is provided immediately before the consumer enters the phase of final list generation. At log-in, the only information needed to go forward with the session was the consumer's ZIP or postal code. At this stage, before generation of the final list, registration requires a valid E-mail address. Optional information includes a first name and a last name of the consumer, a street address, city and state, and selected demographic information including the number of persons in the household, age categories of persons in the household, and number of pets, if any, in the

household. The primary purpose of the registration is customer identification, with a secondary purpose of demographic analysis.

FIG. 9 shows the registration process, which is similar to the Log-in process of FIG. 2, and identical reference numeral are used where appropriate. During the registration process, the customer's E-mail address is verified for correct syntax, as shown in block 90. The first time the customer registers, the E-mail address is used to create a unique household identification (id.), as shown in blocks 230 and 232. Subsequently, the user's household id. is used to reference prior registration information. The next steps are to record or update the consumer information, as indicated in block 234, and to proceed to final list generation, as indicated in block 236.

Final List Generation:

FIG. 10 shows the principal functions performed when the user enters the final list generation phase, as indicated in block 250. The system builds the final list, as indicated in block 252, using the session record that has accumulated items selected by the user, as indicated in block 254. The final list is displayed to the user, as indicated in block 256, and the user may then exit to the main menu (block 258) or go to an exit page (block 260), which may have links to other shopper savings opportunities. The final list generation phase also contains hyperlinks to sites established by individual manufacturers and retailers. Finally, the system displays a "thank you" message and ends the session, as indicated in block 262.

When the user enters the final list generation phase, he or she will have to make a selection from a list of supermarkets in the immediate shopping area. All the coupons printed will be specific to this selected supermarket, and invalid everywhere else.

The final list will contain everything that the consumer has selected during the current session, including shopping list items, supermarket specials, a shopping list of recipe ingredients of selected recipes, including any special offers, and may also provide a recipe page giving the ingredients and preparation instructions for each selected recipe, rebate forms complete with customer information, a summary of offers

selected, and coupons in redeemable format. Information encoded onto each coupon will include the product code, the consumer's household id., an offer code, an expiration date, a serial number, a valid supermarket id., and the consumer's name.

Dynamic Coupon Creation:

Unlike coupons printed for distribution by mail or printed on an in-store printer, the coupons distributed over the Internet in accordance with the present invention, are created in real time to include information provided by the consumer at his or her remote location. Thus each coupon image is generated dynamically to include this consumer-supplied information, which is required principally for security reasons. As explained earlier, each coupon contains not just a product code and coupon conditions, but also the consumer's name or household id., the retailer id. where the coupon must be redeemed, and a coupon sequence number for added security. Merging all this information into a graphical image in a real time mode for transmission over the computer network posed additional challenges for implementation of the invention.

More specifically, the input information that has to be incorporated into each coupon includes:

- The consumer's name and the location coordinates for location on the coupon,
- The coupon expiration date and its coordinates,
- The logo of the system and its coordinates,
- The product offer icon and its coordinates,
- The amount of savings and its coordinates,
- The terms for receiving savings amount and its coordinates
- The legal text and its coordinates,
- The redemption text and its coordinates,
- The coupon sequence number and its coordinates,
- The bar code numbers and their coordinates,
- The supermarket designation and its coordinates, and
- The coupon size and border parameters.

FIG. 11 shows a typical coupon format and FIG. 12 summarizes the

functions performed in creating the coupon dynamically. Block 270 lists the input items obtained from the consumer: the consumer name, the coupon selection and the supermarket selection. Block 272 lists the input items that are obtained from the system: the consumer's household id., the coupon expiration date, the system logo, the product image, the savings amount image, the terms of the offer, the legal text, the redemption text, the coupon sequence number, the bar code numbers and the coupon border and sizes. Of these, only a few are static, i.e. unchanging from coupon to coupon, such as the system logo and the coupon border and size. The rest are dynamic and dependent on the specific offer selected by the consumer, or dependent on information supplied by the consumer. The expiration date is dynamic in the sense that it is keyed to the coupon issue or print date.

The first step in the coupon creation process, indicated in block 274, is to create the coupon background from the coupon size coordinates, to create an image that will be the background of the coupon. The image is created using the standard format known as the graphics image format (GIF). An important feature of the invention is that the printed coupons preferably include a complex background pattern to reduce the potential of fraudulent creation or modification of the coupons. Several intricate background patterns are stored in advance for use in this step of the coupon creation process. The background pattern for current use is selected from the pre-stored patterns on a regular or random basis. The coupon offer information shown in FIG. 11 is printed over the background to render unauthorized creation, modification or duplication more difficult. Basically, the creation of the background includes the steps of first creating a "canvas" for the coupon, such as a one-color background on which the other image elements will be overlaid; then evaluating the coupon components (the retailer, product, text messages and so forth); then selecting a background image based on random or pre-set parameters; and applying the background image to the canvas. Selection of the background pattern may be based, in part, on the content of the coupon. For example, different background images may be used for different manufacturers, different products, or even different consumers. The background image is a complex pattern of relatively light intensity, so as not to interfere with scanned bar codes on the coupon. The pattern

may contain textual characters, or a repetitive design, or may be of a variable and seemingly random nature, as depicted in FIG. 11. The complexity and varied nature of the background image makes unauthorized alteration or creation of coupons extremely difficult, because alteration of any of the coupon components, such as price, bar code or text, will also visibly disturb the background image. Although counterfeit coupons may not always be detected in a retail store, the presence of the background pattern makes it likely that they will be detected at some later stage of coupon redemption.

Next, in block 276, the coupon border is created using the border parameters to outline the background with a border of selected width and color. Next, as indicated in block 278, the graphics images in the inputs are placed on the background using the location images provided in the hypertext markup language (HTML).

Next, as indicated in block 280, the text input items, including the bar codes, are placed on the background image using the location parameters provided in the HTML format. Each text character, including ASCII characters and the bar-code numerical quantities, is converted to a graphical image using internally stored font files. Finally, the composite image of the coupon obtained from the preceding steps is merged with other output data and is output to the consumer's computer, as indicated in block 282.

Transmitting Incentives without Physical Coupons:

An alternative arrangement for distributing purchasing incentives over the Internet is illustrated in FIG. 13. This figure shows an incentive distribution server computer 300 and a user's personal computer 302 connected together through a computer network, indicated by the network cloud 304. The server 300 has an associated storage device 306 on which are stored multiple advertisements and promotions. The system as described thus far operates in much the same way as the system described above with reference to FIGS. 1-11. A user 308 logs on to the server 300 through the network 304 and selects from a variety of offers stored on the storage device 306 by manufacturers and retailers. However, instead of transmitting the coupons to the user computer 302, the server 300 functions in accordance with one of the following options:

(a) The server 300 transmits purchase incentive data to an in-store server 310 in the supermarket selected by the user 308, which gives the user an appropriate discount automatically when he or she presents items for checkout and a point-of-sale checkout scanner 312, with appropriate identification recognized by the in-store server 310. Promotions or discounts are given to the customer, as indicated at 314. The server 300 may also send an advisory message to the customer to confirm the existence of the promotion.

(b) The server 300 transmits the image of a token 316 of some kind to the user's computer 302. The token defines the coupon offer, preferably in coded form, such as in bar codes, but is not recognizable as a coupon. The token may, for example, be an encoded confirmation number. The user 308 presents the token 316 at the store he or she has selected, and receives the appropriate discount or promotion automatically.

Generation and Delivery of Focused Incentives:

The invention may be further enhanced by employing individual purchase histories of individual customers, as depicted in FIG. 14. The shopping behavior of customers is routinely tracked in connection with the generation of in-store incentives in the form of discount coupons printed as the customer pays for his or her purchases, as shown in blocks 400 and 402. Each customer's purchasing behavior is tracked only if the customer provides some form of unique identification during the purchase transactions, such as a check-cashing card, a credit card, a magnetically encoded check, or other form of identification. The purchase of any of a number of selected items can then be associated with a specific customer id., as indicated in block 404, and a system administrator maintains a database of customer purchase histories, as indicated in block 406. When the customer visits the store, a focused incentive may be printed based on a selected event in the customer's past shopping behavior, as indicated in block 408. In accordance with this aspect of the present invention, a customer who has logged in to the system (block 410) is asked to supply the customer id. used for in-store purchases (block 412). The customer id. may be a check-cashing card number, or other form of identification that allows the system to access the customer's purchasing history, and

then select a purchasing incentive based on some aspect of the customer's prior shopping history, as indicated in block 414. This incentive is transmitted to the customer, as indicated in block 416, in the form of an Internet message, for retrieval when the customer next accesses the Web site or checks for electronic mail (E-mail). The incentive message informs the customer that one or more specific offers are available and may be received at the checkout stand when the prerequisite products are purchased. Alternatively, a paper coupon may be transmitted to the customer's computer site and printed for later presentation in the store.

Customers who volunteer the necessary linkage in the form of their customer id. may be rewarded in some manner. The customer id. may be requested only once and then used for all subsequent sessions in which the customer logs in to the system. Once the linkage is established, the consumer purchase history data or targeted incentives needed to support this capability of the invention are periodically transferred from the shopper purchase history system to the on-line system of the present invention.

Delivery of Incentives by E-mail:

As shown in FIG. 15, the system of the invention also has the capability to deliver targeted or untargeted incentives to consumers through their online E-mail addresses on the Internet or another computer network. Retail stores, indicated by block 500, gather purchase data and either the retailers or an independent system administrator accumulates the consumer purchase history in a database, indicated at 502. The database 502 is developed as a result of consumers being uniquely identified on each visit to the store, by use of a frequent shopper card, a credit card or some other form of identification.

Targeted purchase incentives are generated from the consumer purchase history database 502, as indicated in block 504. The system administrator also maintains a consumer database 506, which identifies consumers by their E-mail addresses. Alternatively, the consumer database 506 may be integrated with the consumer purchase history database 502. The consumer database 506 receives data primarily from the system administrator's Web site, indicated at block 508, which, in turn, receives a

consumer's E-mail address from each consumer's computer, indicated at 510. The consumer database 506 may also receive E-mail addresses from independent consumer E-mail address lists, indicated in block 512.

Using E-mail address information from the consumer database 506 and targeted incentive information based on the consumer's purchase history, from database 502, the system of the invention formats an E-mail message to the consumer, as indicated in block 514, and transmits it to the consumer's computer 510 through the consumers E-mail "post office," as indicated in block 516. The purchasing incentives are delivered to the consumer by electronic mail for subsequent printing of a coupon, or simply in the form of a token of some kind to be taken to the store. This approach allows producing targeted, time phased incentives based on the consumer's actual buying patterns and preferences, and delivering them in the home prior to the consumer's shopping trip.

The same delivery mechanism can also be used to deliver untargeted or less targeted incentives from manufacturers, indicated at 518. The manufacturers may, for example, generate weekly offers, as shown in block 520, which the system delivers to selected consumers. Selection of consumers may be based on a customer profile or on demographic information maintained by the system administrator and selected by the manufacturer. For example, the manufacturer may identify the type of household it would like to target and the incentive would be delivered to designated consumers in the consumer database 506 who meet the profile qualifications.

Another aspect of the invention permits the delivery via E-mail of general messages or incentives to consumers who meet selected non-demographic criteria, such as those who have not recently visited the Web site, or those who have not selected or redeemed online purchase incentives during a recent selected period. In such cases, a special promotion might be delivered to the consumer to encourage more active participation. Untargeted messages or notices can also be broadcast to large numbers of consumers to encourage them to visit a specific retail store, or to purchase a specific manufacturer's product, or to visit the Web site.

Personal Page:

Another feature of the invention is the more direct targeting of incentives using a "personal page" for each consumer who wants one established. As indicated in FIG. 16, when the consumer has logged in to the system and is about to sign off, through the final list generation or checkout phase 600, he or she may be asked to complete a marketing questionnaire 602. The questionnaire requests selected personal or demographic information, which the consumer may elect to volunteer once the benefits of establishing a "personal" Web page have been explained. If the consumer elects not to provide the information, the system provides a normal exit and log out procedure. However, if the required information is provided, the system sets up a personal page for the consumer, as indicated in block 604, and establishes a personal database 606, also for the individual consumer. The personal page displays a screen of information that is consumer-specific in many respects but will, of course, contain some data that is supplied to all consumers who have personal pages. The page is preferably personalized with the consumer's name and may also contain the shopping list, if any, already generated by the consumer in the current online session. Significantly, the personal page will also contain offers and incentives targeted to the specific consumer, as further explained below. When the personal page is first set up, the system generates an E-mail message to the consumer to advise him or her of the address for gaining access to the personal page, as indicated at 608.

Subsequently, when the consumer visits the personal page, as indicated at 610, he or she has an opportunity to select personal preferences as to the content of the page, as indicated in block 612. On each visit to the personal page, the consumer may be asked additional questions concerning demographics, personal purchase preferences, and so forth, as indicated at 614, the responses being used to update the personal database 606, as indicated by line 616. From the personal page, the consumer may elect to follow a link 618 back to the system main menu 620.

All of the steps depicted in FIG. 16 pertain to setting up the personal page for a consumer and gathering information from the consumer for establishing and updating the personal page. When visiting the personal page, the consumer may select

any of the incentives or offers displayed, and these will be incorporated into the consumer order in the same manner as described above.

FIG. 17 depicts how the personal database 606 for each consumer is automatically updated based on consumer purchases and on changes to available incentives. The functions shown are typically performed periodically, such as every day or week, but can also be performed in real time. The consumer purchase history 502, which was discussed with reference to FIG. 15, is generated and updated from various sources pertaining to the shopping activities of all identifiable consumers. In-store loyalty programs based on past purchasing activity are one source of such data. Any online shopping activity is another source. Data from the consumer purchase history database 502 and from a database 622 of available incentives are joined together and used to generate incentives to be displayed on each consumer's personal page. The personal page contents are updated, as indicated in block 624, the personal database 606 is updated to reflect these changes, and the consumer is notified by E-mail, as indicated in block 626, that the personal page has been updated. The consumer can then go to the personal page and view the updated personal page.

Use of the personal page permits manufacturers and retailers to focus incentives on specific consumers, based on demographic data and prior purchasing data in the consumer's personal database 606. Consumers who have consented to have the personal page established, are much more likely to respond favorably to incentive offers in their areas of interest, and manufacturers are more likely to provide higher value offers when they are targeted to specific consumers of interest to the manufacturers.

"Token and Voucher" Instead of Coupon:

A potential difficulty with distributing coupons through a computer network is that manufacturers and retailers may perceive such a system as being more prone to fraud than conventional coupon distribution methods. The concern, of course, is that users may alter the content of coupon images (e.g., the coupon value), or print a coupon image repeatedly, or compose a fraudulent coupon from scratch. Printing coupons with a complex background pattern, as discussed above, renders unauthorized

coupon modification or creation more difficult, but a potential for fraud still exists. Generating a "token" instead of coupon, as described above with reference to FIG. 13, also reduces the risk of fraud. Another technique similar to this is depicted in FIG. 18. A token 316 is generated by the user's computer 302 after interaction with the distribution server 300. The user chooses from incentive offers as described above, but instead of a coupon the computer 302 generates the token 316.

The token 316 includes coded information, e.g., bar-coded information, establishing that the user visited the network site and selected one or more promoted items. Although the token is described in this specification as being in printed form, including bar-coded information, clearly other forms of the token may be preferred as different technologies develop. For example, the token may be encoded onto a user's identification card, using either magnetic stripe recording or "smart card" technology. For this aspect of the invention, the physical form of the token is of no consequence, since it is used only to establish that the user visited the computer network site and selected one or more promoted items. At about the same time that the token is generated, the user also receives a shopping list that identifies the promoted items that were selected during the site visit, as well as any other selected items. Although the token is not a coupon and has no value *per se*, it is a trigger mechanism that the user/consumer can present at a qualified retail store, to receive a voucher for a cumulative cash discount based on the promoted items purchased by the consumer.

When the user 308 takes the token to the selected store and makes purchases 630, the purchased items and the token are all scanned by the point-of-sale checkout scanner 312 and a voucher 632 is generated, based on the user's purchase of qualifying items. Each purchase in the user's order that matches weekly offers that have been predefined in the advertisements and promotions database 306 and have been selected by the user, are listed on the voucher 632. The voucher 632 provides a cumulative cash discount to the user (either immediately or on a subsequent store visit, no matter which items are purchased in the subsequent visit). The voucher also contains a bar-coded price look-up (PLU) code, which requires the store checker to enter a "price," i.e. the total voucher amount, in order to process the voucher and apply the

discount to the user's order.

The token and voucher program provides advantages for all parties to each transaction. First, for manufacturers there is increased security for promotions introduced by computer networks such as the Internet. Instead of printing potentially reproducible monochrome coupons that are effectively redeemable for cash, the user's home computer generates a token that has to be taken to a store at which the qualifying products must be purchased by user before a cash voucher is generated. Since the token system ensures that the discounted products are purchased, the manufacturer pays only for positive results for each incentive offered. Moreover, the system avoids the inherent negative connotations of coupons.

Similarly, for the retailer, handling and redemption problems associated with black and white coupons generated by computer users are eliminated. The retailer also benefits because, one version of the system requires the user to return to the store to present the voucher. Consumers who are also Internet subscribers benefit because the system should allow for the distribution of more incentives, and incentives of higher value, over the Internet. The system also reduces the consumer paperwork because multiple coupons do not have to be clipped, printed and taken to the store. Only a single token is needed to make the required purchases and obtain a voucher for a cumulative cash discount, redeemable either immediately or at the next store or chain visit.

Conclusion:

It will be appreciated from the foregoing that the present invention represents a significant advance over other systems for distributing purchasing incentives and other shopping aids via computer network. In particular, the system and method of the invention provide for incentive distribution in such a way that the opportunities for fraudulent generation or use of coupons is minimized, since each coupon uniquely identifies the consumer to whom is was issued and the retail store or chain in which it can be redeemed. The invention also uses a novel technique for dynamically creating coupon images for transmission over a computer network. In an alternative embodiment of the invention, physical coupons are not printed at all, but coupon data are either

CLAIMS

We claim:

1. A method for distributing purchasing incentives to retail customers, comprising the following steps performed at a central site in cooperation with a communication device at a customer site:

logging in a remotely located customer using identity data and region data transmitted by the customer over a communication network;

transmitting over the communication network a plurality of incentive offers to the registered customer, the incentive offers being exercisable in the customer's region;

receiving incentive offer selection data from the customer over the communication network, the offer selection data including the designation of a retailer at which selected offer or offers may be exercised;

generating a purchasing incentive containing in encoded form the identity of the retailer designated by the customer and the identity of the customer; and

transmitting at least one incentive to the customer over the communication network, wherein the transmitted incentive is encoded with the identity of the retailer selected by the customer.

2. A method as defined in claim 1, and further comprising the step of:

communicating with the customer concerning the use of other shopping aids.

3. A method as defined in claim 2, wherein the step of communicating with the customer includes:

transmitting a list of products available for purchase;

receiving customer selections from the list of products; and

transmitting a shopping list to the customer.

4. A method as defined in claim 2, wherein the step of communicating with the customer includes:

transmitting a list of recipes to the customer;

receiving customer selection of one or more recipes;

transmitting back to the customer a shopping list that includes ingredient products needed in each selected recipe; and

transmitting to the customer at least one purchase incentive pertaining to an ingredient product used in a selected recipe.

5. A method as defined in any one of the preceding claims, wherein the step of transmitting a plurality of incentive offers includes transmitting incentive offers from specific product manufacturers.

6. A method as defined in any one of the preceding claims, wherein the step of transmitting a plurality of incentive offers includes transmitting incentive offers from specific retailers.

7. A method as defined in any one of the preceding claims, wherein the step of generating a purchase incentive includes:

converting textual and numeric information provided by the customer to graphical form;

converting other textual and numeric information to graphical form; and

merging the converted information with other graphical information defining the incentive, to form a composite graphical incentive image for transmission to the customer.

8. A method as defined in claim 7, wherein the step of generating a purchase incentive further includes:

generating a complex graphical background pattern for the incentive image; and

merging the background information with the textual, numeric and other graphical information in the incentive image.

9. A method as defined in any one of the preceding claims, wherein the step of transmitting at least one incentive includes:

transmitting only an advisory message to the customer; and

transmitting the terms of the incentive directly to the retail store selected by the customer, for use by the customer on a subsequent visit to the store.

10. A method as defined in any one of the preceding claim, wherein the step of transmitting at least one incentive includes:

transmitting only an incentive token to the customer; and

transmitting the terms of the incentive directly to the retail store selected by the customer, for use by the customer, who brings the token to the store on a subsequent visit.

11. A method for distributing purchasing incentives and other shopping aids to customers over a communication network, the method comprising the steps of:

logging in as a customer by providing at least an individual identification, a postal region code, and retail store selection;

transmitting from a central site and receiving at a remote customer site, a plurality of incentive offers, each of which is exercisable only in the customer's postal region;

selecting at the customer site one or more of the incentive offers and transmitting these selections back to the central site;

generating at least one purchasing incentive containing in encoded form the identity of the retail store selected by the customer and the identity of the customer; and

transmitting the at least one incentive to the customer.

12. A method as defined in claim 11, and further comprising:

in response to a customer's action, transmitting a shopping list to the customer for selection of products;

receiving the customers selection of products on the shopping list; and

transmitting a customer-specific shopping list to the customer as a shopping aid.

13. A method as defined in claims 11 or 12, and further comprising:

in response to a customer's action, transmitting a recipe list to the customer for possible selection of a recipe;

receiving the customer's selection of one or more recipes; and

transmitting a complete recipe to the customer, including a list of ingredients, and transmitting any purchasing incentives tied to ingredients of the recipe.

14. A method as defined in any one of claims 11 through 13, wherein the step of transmitting a plurality of incentive offers includes:

transmitting one set of incentive offers originating from product manufacturers; and

transmitting another set of incentive offers originating from product retailers.

15. A system for distributing purchasing incentives to retail customers, comprising:

a communication network establishing two-way communication between a central site and each of a plurality of customer devices;

a file at the central site containing a plurality of incentive offers;

a computer located at the central site, the computer including

means for storing customer information at the central site, based on information transmitted from any of the customer devices to the central site computer, over the communication network, the customer information

including geographical region data and identification data;

means for retrieving incentive offers from the file of incentive offers, based on the customer's geographical region, and transmitting the retrieved offers to the customer over the communication network;

means for receiving customer selections made from the incentive offers transmitted to the customer, and for receiving a customer designation of a retailer at which the selected incentives are to be exercised;

means for generating at least one purchasing incentive containing in encoded form the identity of the retailer designated by the customer and the identity of the customer; and

means for transmitting the generated purchasing incentive to the customer over the communication network.

16. A system as defined in claim 15, wherein:

the system further comprises another file at the central site containing a list of products available for purchase; and

the computer at the central site further includes means, responsive to a customer request, for transmitting the list of products to the customer, receiving customer selections from the list, and transmitting a shopping list back to the customer.

17. A system as defined in claims 15 or 16, wherein:

the system further comprises another file at the central site containing a list of recipes available for customer use; and

the computer at the central site further includes means, responsive to a customer request, for transmitting the list of recipes to the customer, receiving customer selections from the list, and transmitting complete recipes back to the customer, together with an ingredients shopping list and any associated purchasing incentives.

18. A system as defined in any one of claims 15 through 17, wherein the means for retrieving incentive offers and transmitting them to the customer includes:

a manufacturer offer file containing purchasing incentive offers currently proposed by manufacturers of products for sale to customers.

19. A system as defined in any one of claims 15 through 18, wherein the means for retrieving incentive offers and transmitting them to the customer includes:

a retailer offer file containing purchasing incentive offers currently proposed by retailers of products for sale to customers.

20. A system as defined in any one of claims 15 through 19, wherein:

the generated purchasing incentive is transmitted to the customer in the form of an advisory message only; and

the computer further includes means for transmitting the terms of a purchasing incentive directly to the retail store designated by the customer, who may then exercise the incentive upon visiting the designated store.

21. A system as defined in any one of claims 15 through 19, wherein:

the generated purchasing incentive is transmitted to the customer in the form of an encoded token only; and

the computer further includes means for transmitting the terms of the purchasing incentive directly to the retail store designated by the customer, who may then exercise the incentive upon visiting the designated store.

22. A system as defined in any one of claims 15 through 21, wherein:

the computer located at the central site further includes means for storing a customer identification (ID). volunteered by the customer and used in prior purchases by the customer; and

the means for generating at least one purchasing incentive includes means for generating a purchasing incentive based on the customer's prior purchasing behavior.

23. A method for distributing purchasing incentives and other shopping

aids to customers over a communication network, the method comprising the steps of:

logging in as a customer by providing at least a customer id. used by the customer in purchase transactions a retail store, and a customer postal region;

transmitting from a central site and receiving at a remote customer site, a plurality of incentive offers, each of which is exercisable based on the customer's postal region, at least one of the offers being based on the customer's prior shopping behavior as determined from the customer id.;

selecting at the customer site one or more of the incentive offers and transmitting these selections back to the central site;

generating at least one purchasing incentive selected by the customer; and

transmitting the at least one incentive to the customer.

24. A method for distributing purchasing incentives to retail customers, comprising the steps of:

maintaining a consumer purchase history database derived in part from accumulated purchase data of identifiable consumers;

maintaining a consumer database that identifies consumers by their electronic addresses;

generating purchase incentives for selected consumers; and

transmitting the purchase incentives to the selected consumers by electronic mail.

25. A method as defined in claim 24, wherein:

the step of maintaining the consumer database includes obtaining registration information from each consumer who logs in to a communications system information site, and transferring electronic mail information to the consumer database.

26. A method as defined in claims 24 or 25, and further comprising the step of:

selecting consumers to receive at least one purchase incentive on the basis

of demographic data stored in the consumer database.

27. A method as defined in claims 24 or 25, and further comprising the step of:

selecting consumers to receive at least one purchase incentive on the basis of non-demographic factors such as frequency of usage of coupons and frequency of usage of the online system.

28. A method for distributing purchasing incentives to retail customers, comprising the steps of:

maintaining a consumer purchase history database derived in part from accumulated purchase data of identifiable consumers;

obtaining personal information from a consumer;

establishing a personal page in a computer network, for any consumer who requests one, based in part on the personal information obtained from the consumer, wherein the personal page contains information about incentives directed specifically to the consumer associated with the page;

maintaining a consumer personal database for each consumer having a personal page, to store information contained in the personal page of the consumer;

generating purchase incentives for the consumer based in part on prior purchasing behavior and on personal information known from the consumer's personal database;

updating the personal page to include the generated purchase incentives; and

transmitting an advisory message to the consumer concerning the updated personal page.

29. A method for distributing purchasing incentives to retail customers, comprising the steps of:

transmitting promotional materials pertaining to product discounts, to a

consumer's remote terminal;

displaying the promotional materials pertaining to product discounts at the consumer's remote terminal;

receiving consumer selections of product discounts, made at the consumer's remote terminal;

in response to the consumer selections, generating a token and transmitting it to the consumer's remote terminal, wherein the token identifies the consumer as one who has made online discounted product selections;

scanning the token in a retail store, together with items purchased by the consumer;

verifying that the discounted items selected by the consumer at the consumer's remote terminal were purchased by the consumer; and

generating a voucher that provides a cash discount to the consumer, the cash discount being the total of all verified item discounts selected by the consumer.

30. A method as defined in claim 29, wherein:

the step of generating a voucher generates an instantly redeemable voucher.

31. A method as defined in claim 29, wherein:

the step of generating a voucher generates a voucher that is redeemable on a subsequent store visit.

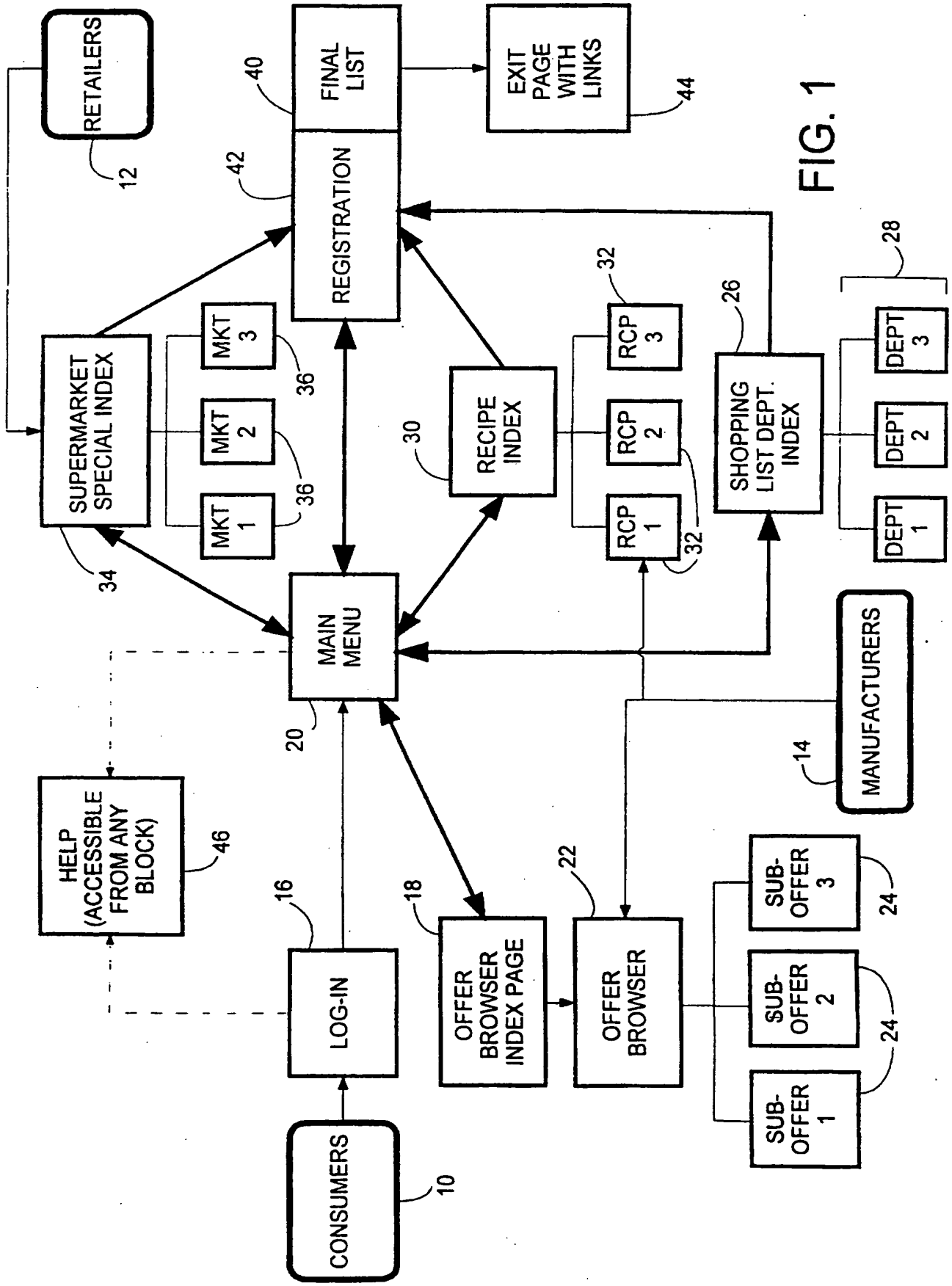

RETAILERS
12
FINAL LIST
40
EXIT PAGE WITH LINKS
44
REGISTRATION
42
SUPERMARKET SPECIAL INDEX
34
MKT 3
MKT 2
MKT 1
36
RECIPE INDEX
30
RCP 3
RCP 2
RCP 1
32
SHOPPING LIST DEPT. INDEX
26
DEPT 3
DEPT 2
DEPT 1
28
MAIN MENU
20
MANUFACTURERS
14
HELP (ACCESSIBLE FROM ANY BLOCK)
46
LOG-IN
16
OFFER BROWSER INDEX PAGE
18
OFFER BROWSER
22
SUB-OFFER 3
SUB-OFFER 2
SUB-OFFER 1
24
CONSUMERS
10

FIG. 1

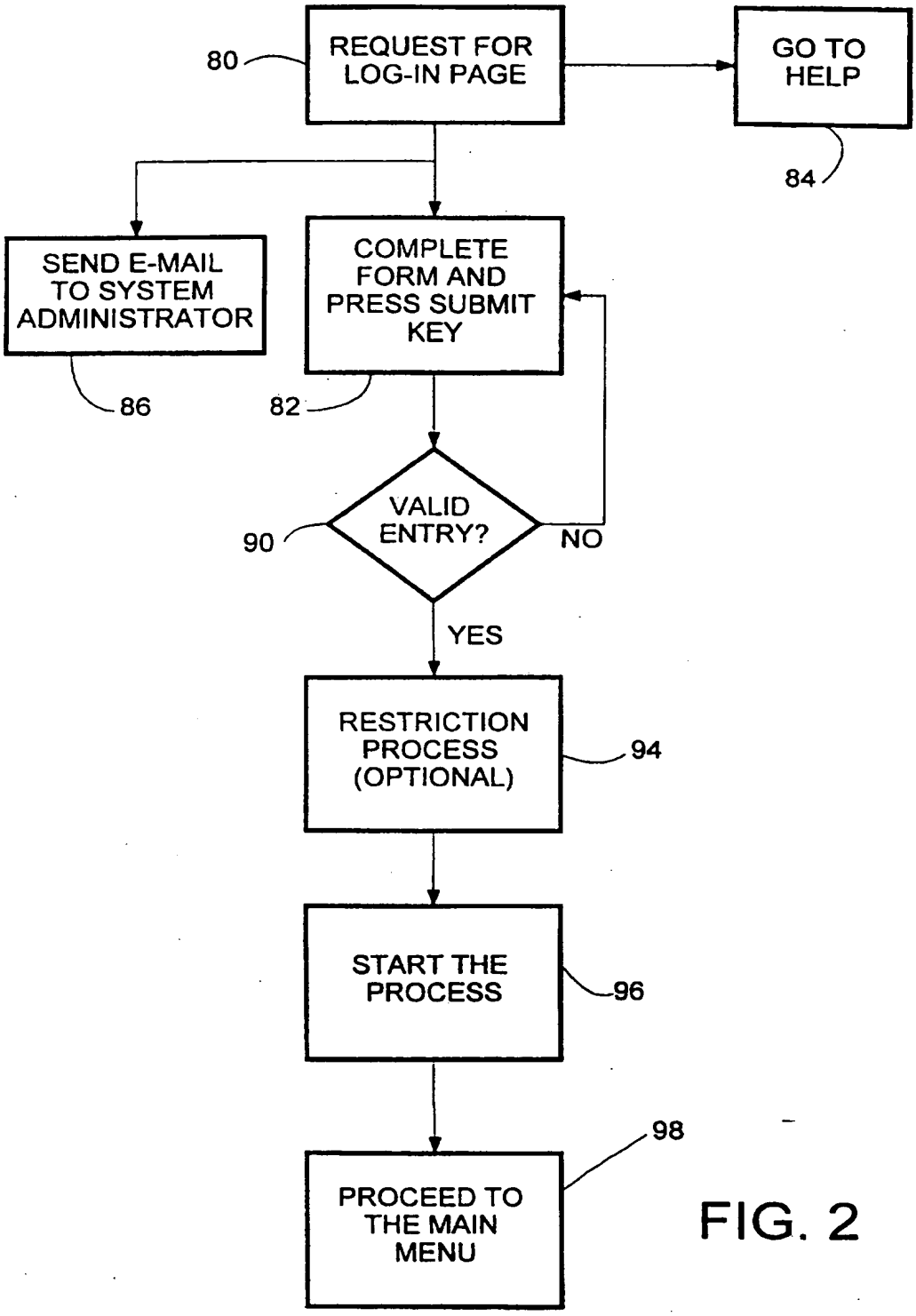

80
REQUEST FOR LOG-IN PAGE
GO TO HELP
84
SEND E-MAIL TO SYSTEM ADMINISTRATOR
86
COMPLETE FORM AND PRESS SUBMIT KEY
82
VALID ENTRY?
90
NO
YES
RESTRICTION PROCESS (OPTIONAL)
94
START THE PROCESS
96
98
PROCEED TO THE MAIN MENU

FIG. 2

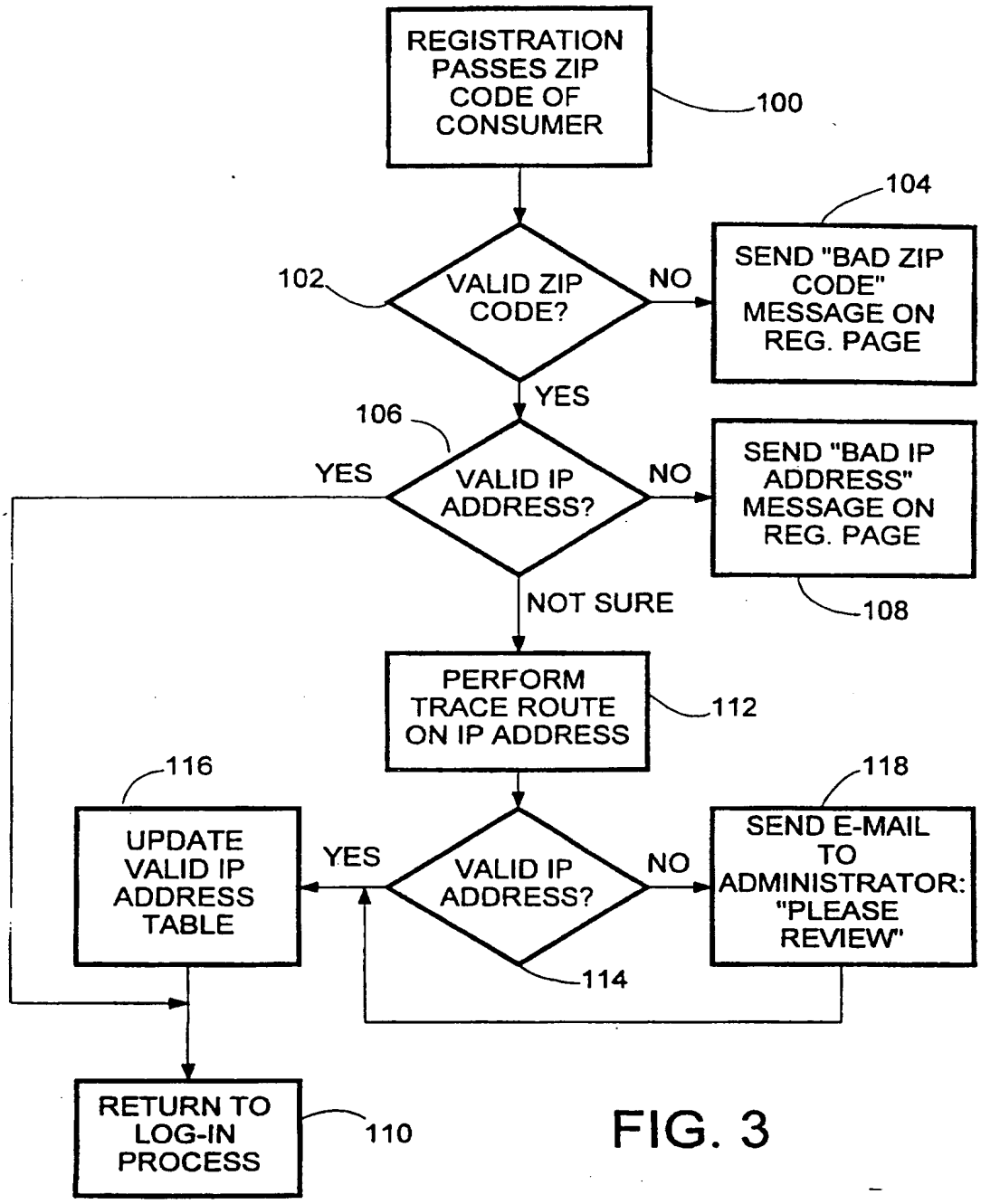

REGISTRATION PASSES ZIP CODE OF CONSUMER
100
VALID ZIP CODE?
102
NO
SEND "BAD ZIP CODE" MESSAGE ON REG. PAGE
104
YES
VALID IP ADDRESS?
106
YES
NO
SEND "BAD IP ADDRESS" MESSAGE ON REG. PAGE
108
NOT SURE
PERFORM TRACE ROUTE ON IP ADDRESS
112
VALID IP ADDRESS?
114
YES
NO
UPDATE VALID IP ADDRESS TABLE
116
SEND E-MAIL TO ADMINISTRATOR: "PLEASE REVIEW"
118
RETURN TO LOG-IN PROCESS
110

FIG. 3

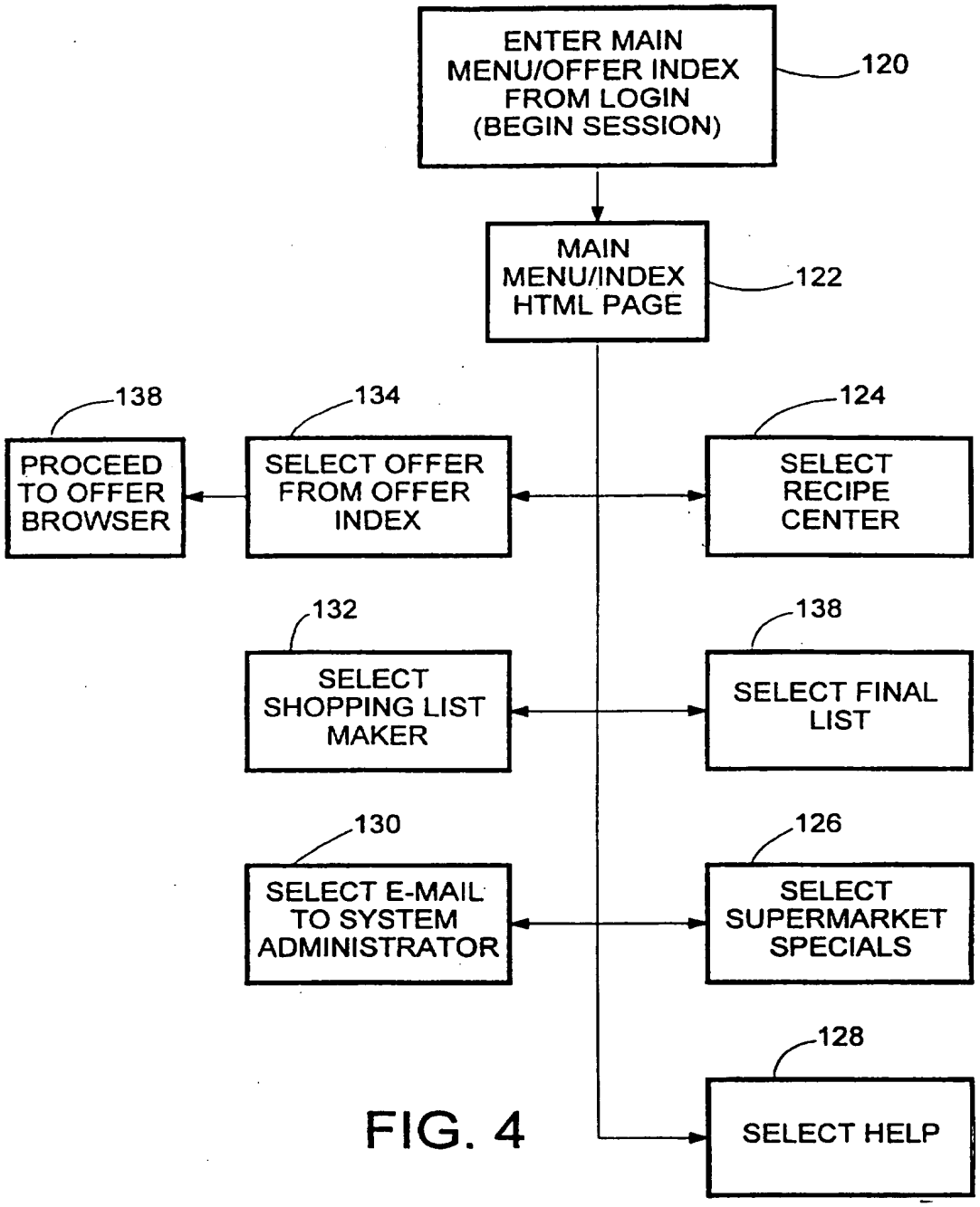

ENTER MAIN MENU/OFFER INDEX FROM LOGIN (BEGIN SESSION)
120
MAIN MENU/INDEX HTML PAGE
122
138
PROCEED TO OFFER BROWSER
134
SELECT OFFER FROM OFFER INDEX
124
SELECT RECIPE CENTER
132
SELECT SHOPPING LIST MAKER
138
SELECT FINAL LIST
130
SELECT E-MAIL TO SYSTEM ADMINISTRATOR
126
SELECT SUPERMARKET SPECIALS
128
SELECT HELP

FIG. 4

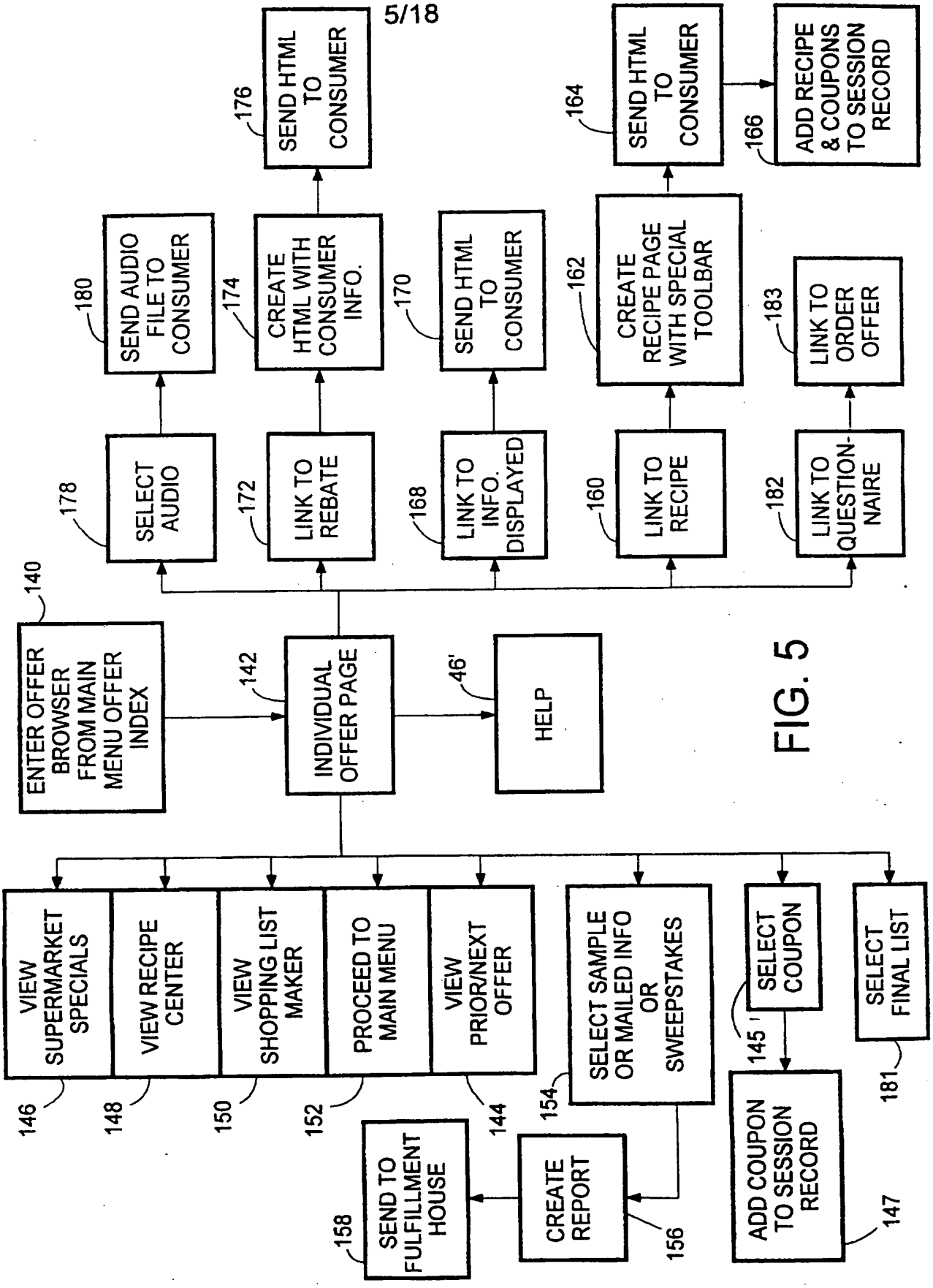

ENTER OFFER BROWSER FROM MAIN MENU OFFER INDEX
140
INDIVIDUAL OFFER PAGE
142
HELP
46'
SELECT AUDIO
178
LINK TO REBATE
172
LINK TO INFO. DISPLAYED
168
LINK TO RECIPE
160
LINK TO QUESTION-NAIRE
182
SEND AUDIO FILE TO CONSUMER
180
CREATE HTML WITH CONSUMER INFO.
174
SEND HTML TO CONSUMER
170
CREATE RECIPE PAGE WITH SPECIAL TOOLBAR
162
LINK TO ORDER OFFER
183
SEND HTML TO CONSUMER
176
SEND HTML TO CONSUMER
164
ADD RECIPE & COUPONS TO SESSION RECORD
166
VIEW SUPERMARKET SPECIALS
146
VIEW RECIPE CENTER
148
VIEW SHOPPING LIST MAKER
150
PROCEED TO MAIN MENU
152
VIEW PRIOR/NEXT OFFER
144
SELECT SAMPLE OR MAILED INFO OR SWEEPSTAKES
154
SELECT COUPON
145'
SELECT FINAL LIST
181
SEND TO FULFILLMENT HOUSE
158
CREATE REPORT
156
ADD COUPON TO SESSION RECORD
147

FIG. 5

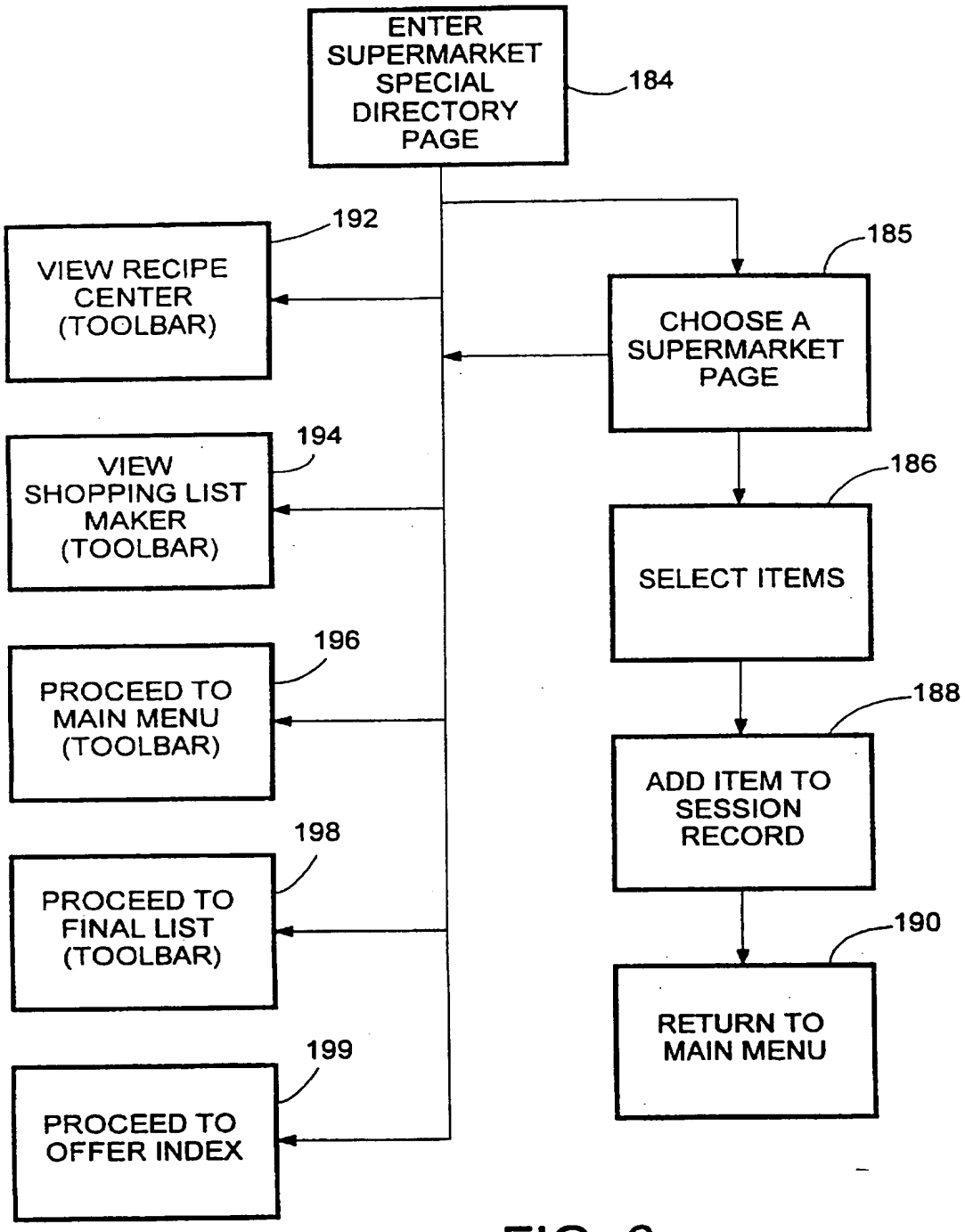

ENTER SUPERMARKET SPECIAL DIRECTORY PAGE
184
VIEW RECIPE CENTER (TOOLBAR)
192
CHOOSE A SUPERMARKET PAGE
185
VIEW SHOPPING LIST MAKER (TOOLBAR)
194
SELECT ITEMS
186
PROCEED TO MAIN MENU (TOOLBAR)
196
ADD ITEM TO SESSION RECORD
188
PROCEED TO FINAL LIST (TOOLBAR)
198
RETURN TO MAIN MENU
190
PROCEED TO OFFER INDEX
199

FIG. 6

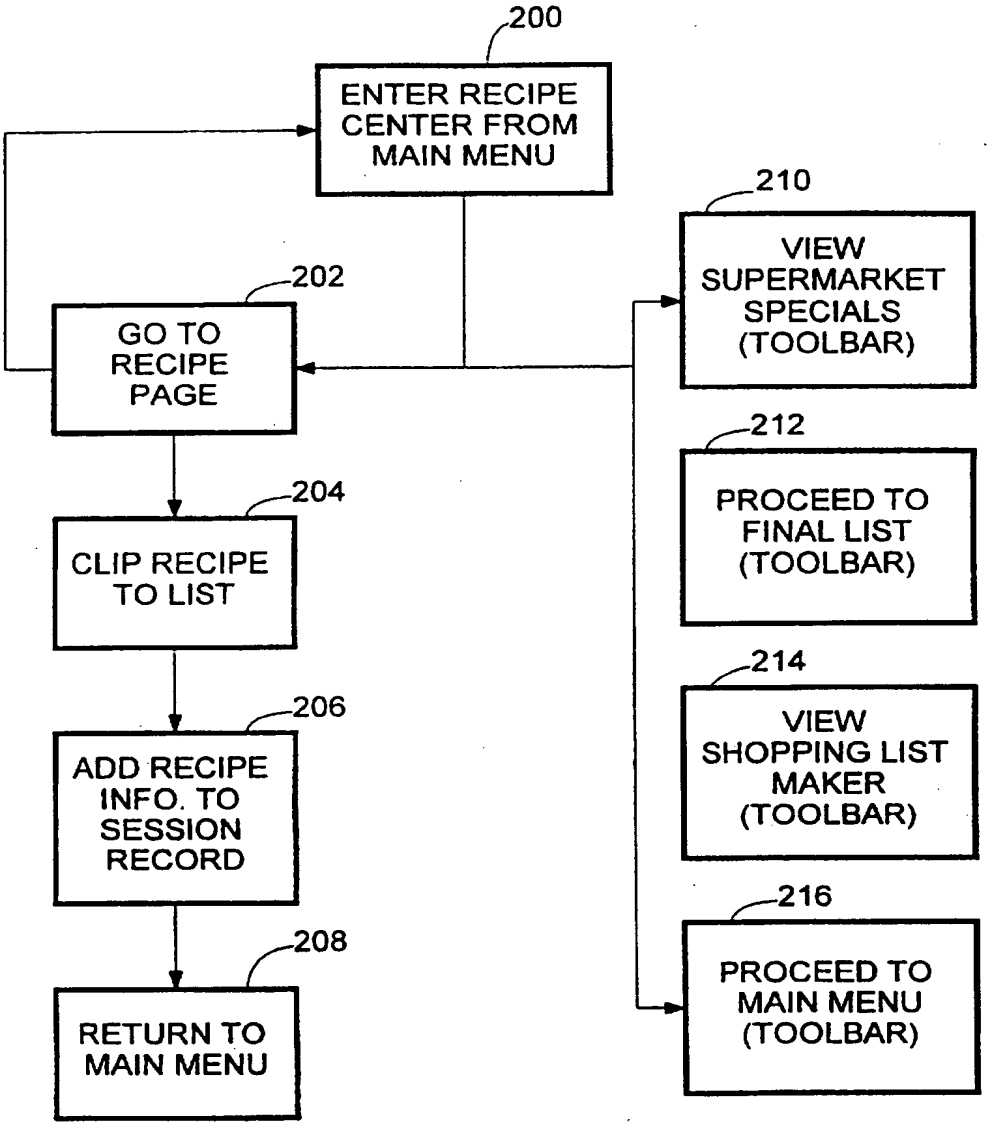

200
ENTER RECIPE CENTER FROM MAIN MENU
202
GO TO RECIPE PAGE
204
CLIP RECIPE TO LIST
206
ADD RECIPE INFO. TO SESSION RECORD
208
RETURN TO MAIN MENU
210
VIEW SUPERMARKET SPECIALS (TOOLBAR)
212
PROCEED TO FINAL LIST (TOOLBAR)
214
VIEW SHOPPING LIST MAKER (TOOLBAR)
216
PROCEED TO MAIN MENU (TOOLBAR)

FIG. 7

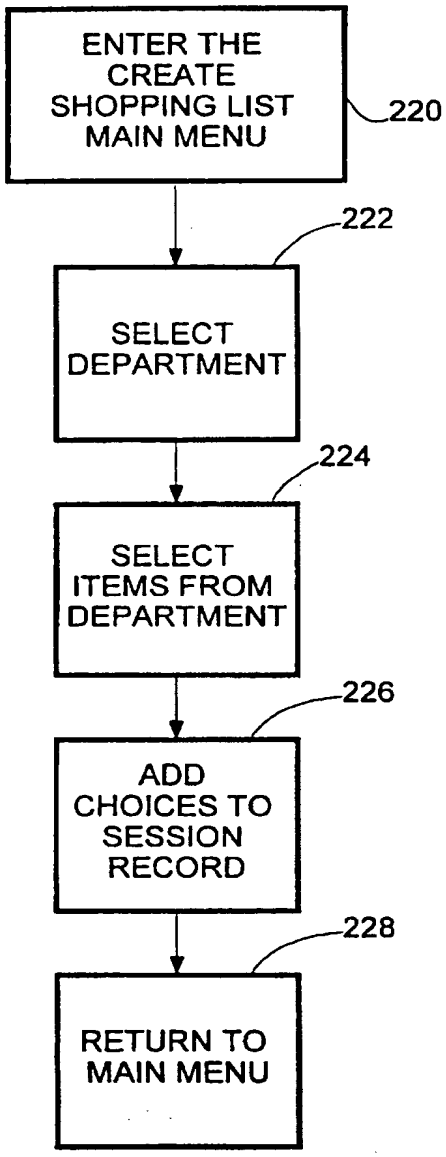

ENTER THE CREATE SHOPPING LIST MAIN MENU
220
222
SELECT DEPARTMENT
224
SELECT ITEMS FROM DEPARTMENT
226
ADD CHOICES TO SESSION RECORD
228
RETURN TO MAIN MENU

FIG. 8

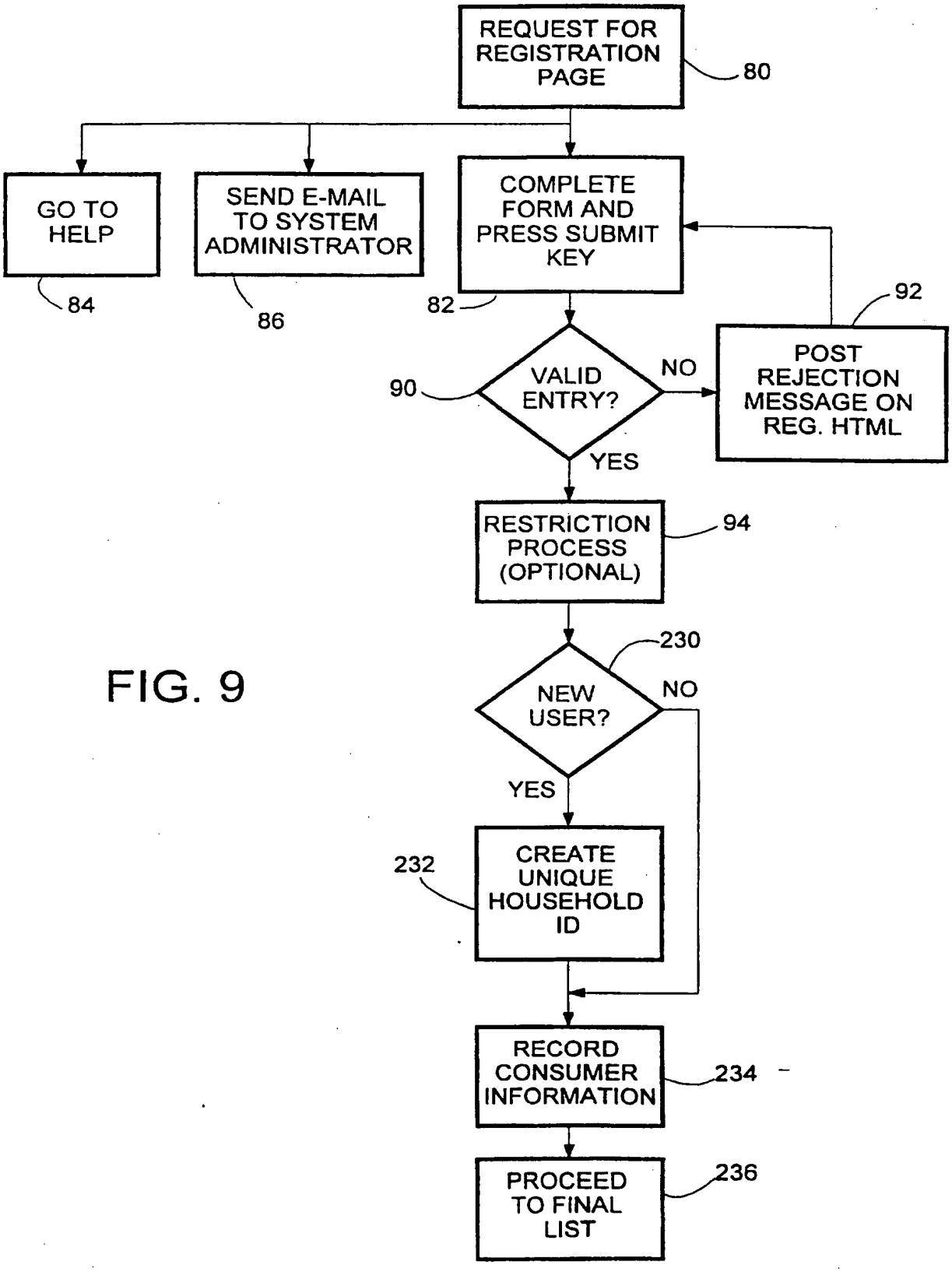

REQUEST FOR REGISTRATION PAGE
80
GO TO HELP
84
SEND E-MAIL TO SYSTEM ADMINISTRATOR
86
COMPLETE FORM AND PRESS SUBMIT KEY
82
VALID ENTRY?
90
NO
POST REJECTION MESSAGE ON REG. HTML
92
YES
RESTRICTION PROCESS (OPTIONAL)
94
NEW USER?
230
NO
YES
CREATE UNIQUE HOUSEHOLD ID
232
RECORD CONSUMER INFORMATION
234
PROCEED TO FINAL LIST
236

FIG. 9

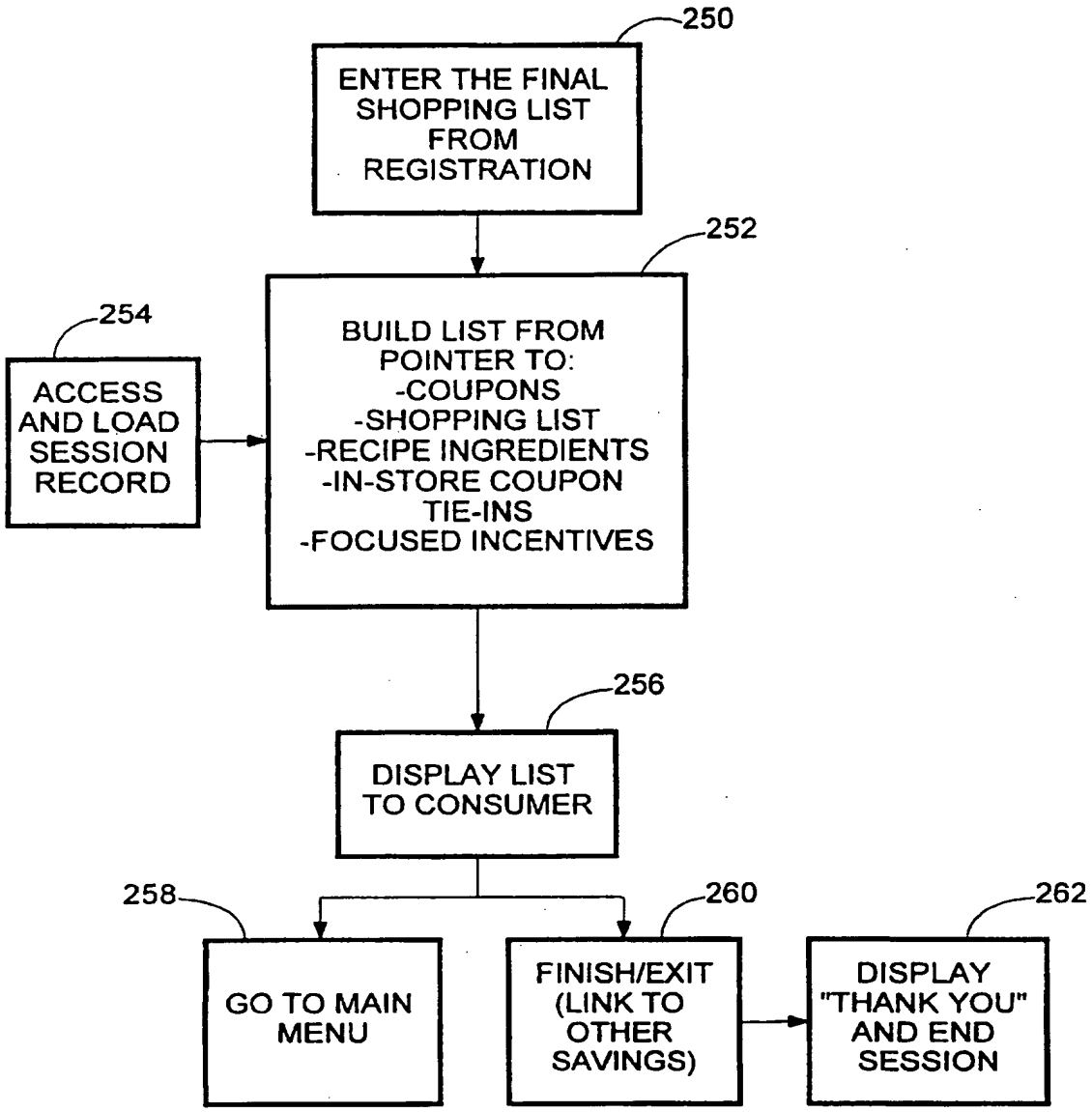
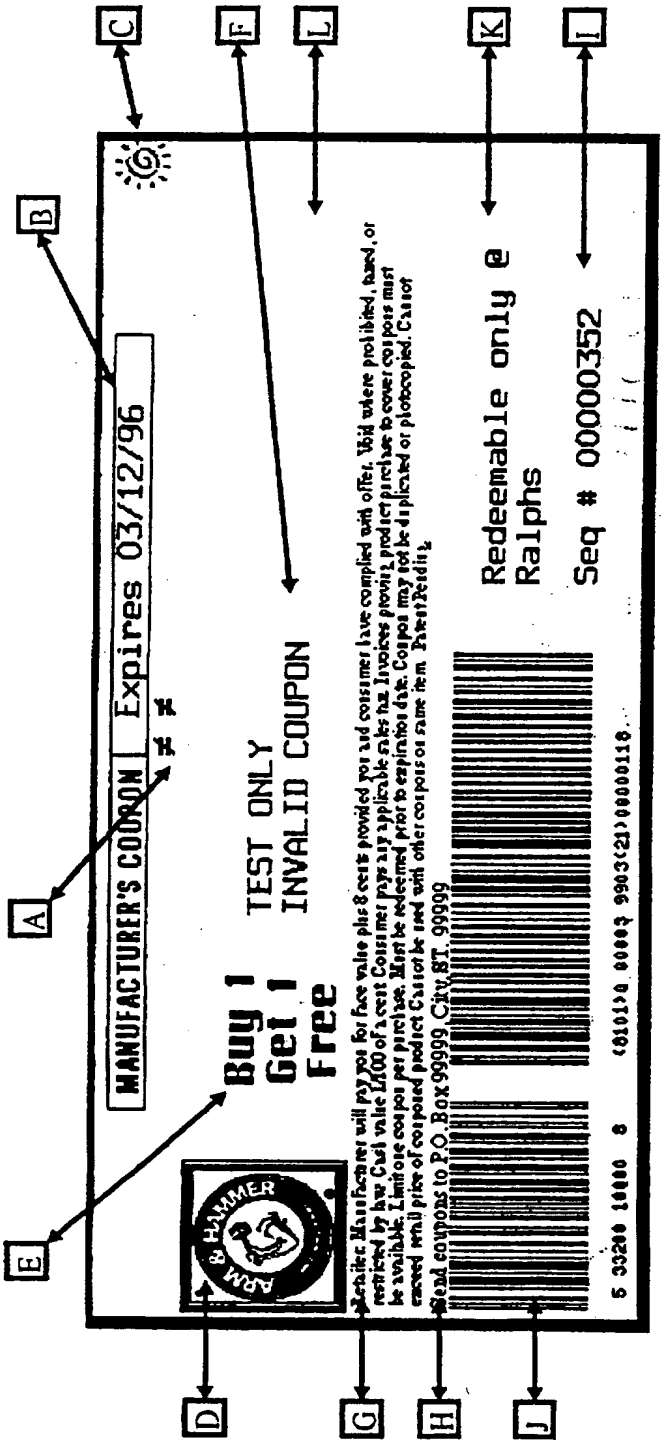

250
ENTER THE FINAL SHOPPING LIST FROM REGISTRATION
252
254
ACCESS AND LOAD SESSION RECORD
BUILD LIST FROM POINTER TO:
-COUPONS
-SHOPPING LIST
-RECIPE INGREDIENTS
-IN-STORE COUPON TIE-INS
-FOCUSED INCENTIVES
256
DISPLAY LIST TO CONSUMER
258
260
262
GO TO MAIN MENU
FINISH/EXIT (LINK TO OTHER SAVINGS)
DISPLAY "THANK YOU" AND END SESSION

FIG. 10



LEGEND:

A. CONSUMER'S NAME
B. COUPON EXPIRATION DATE
C. SYSTEM ADMINISTRATOR'S LOGO ICON
D. PRODUCT OFFER ICON
E. AMOUNT OF SAVINGS
F. TERMS FOR RECEIVING SAVINGS AMOUNT
G. LEGAL TEXT
H. REDEMPTION TEXT
I. COUPON SEQUENCE NUMBER
J. BAR COUPON NUMBERS:
- UPC TYPE 5 CODE
- EAN TYPE 128 CODE
K. SUPERMARKET DESIGNATION
L. COMPLEX BACKGROUND PATTERN

FIG. 11

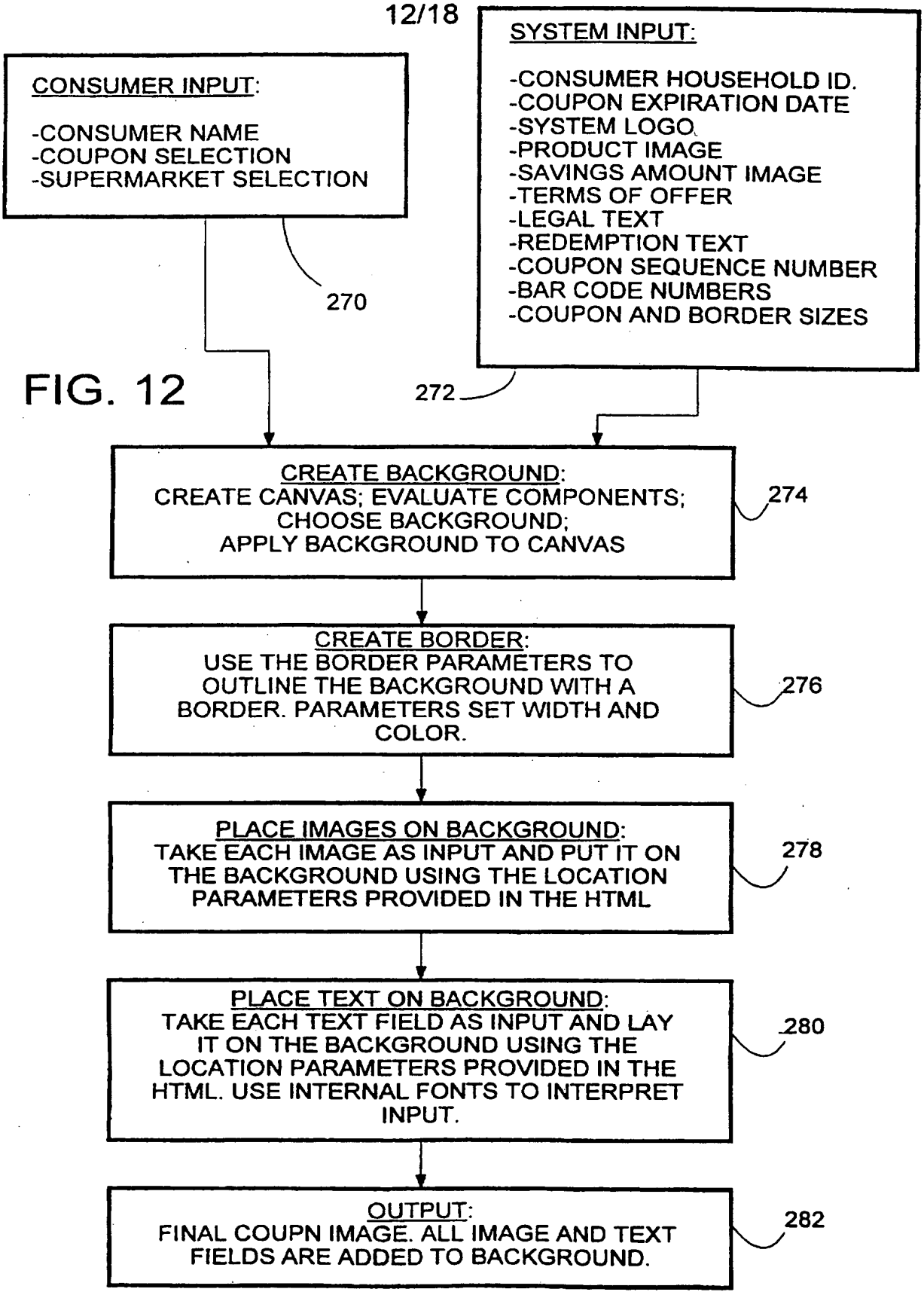

CONSUMER INPUT:
-CONSUMER NAME
-COUPON SELECTION
-SUPERMARKET SELECTION
270
SYSTEM INPUT:
-CONSUMER HOUSEHOLD ID.
-COUPON EXPIRATION DATE
-SYSTEM LOGO
-PRODUCT IMAGE
-SAVINGS AMOUNT IMAGE
-TERMS OF OFFER
-LEGAL TEXT
-REDEMPTION TEXT
-COUPON SEQUENCE NUMBER
-BAR CODE NUMBERS
-COUPON AND BORDER SIZES
272
CREATE BACKGROUND:
CREATE CANVAS; EVALUATE COMPONENTS;
CHOOSE BACKGROUND;
APPLY BACKGROUND TO CANVAS
274
CREATE BORDER:
USE THE BORDER PARAMETERS TO OUTLINE THE BACKGROUND WITH A BORDER. PARAMETERS SET WIDTH AND COLOR.
276
PLACE IMAGES ON BACKGROUND:
TAKE EACH IMAGE AS INPUT AND PUT IT ON THE BACKGROUND USING THE LOCATION PARAMETERS PROVIDED IN THE HTML
278
PLACE TEXT ON BACKGROUND:
TAKE EACH TEXT FIELD AS INPUT AND LAY IT ON THE BACKGROUND USING THE LOCATION PARAMETERS PROVIDED IN THE HTML. USE INTERNAL FONTS TO INTERPRET INPUT.
280
OUTPUT:
FINAL COUPN IMAGE. ALL IMAGE AND TEXT FIELDS ARE ADDED TO BACKGROUND.
282

FIG. 12

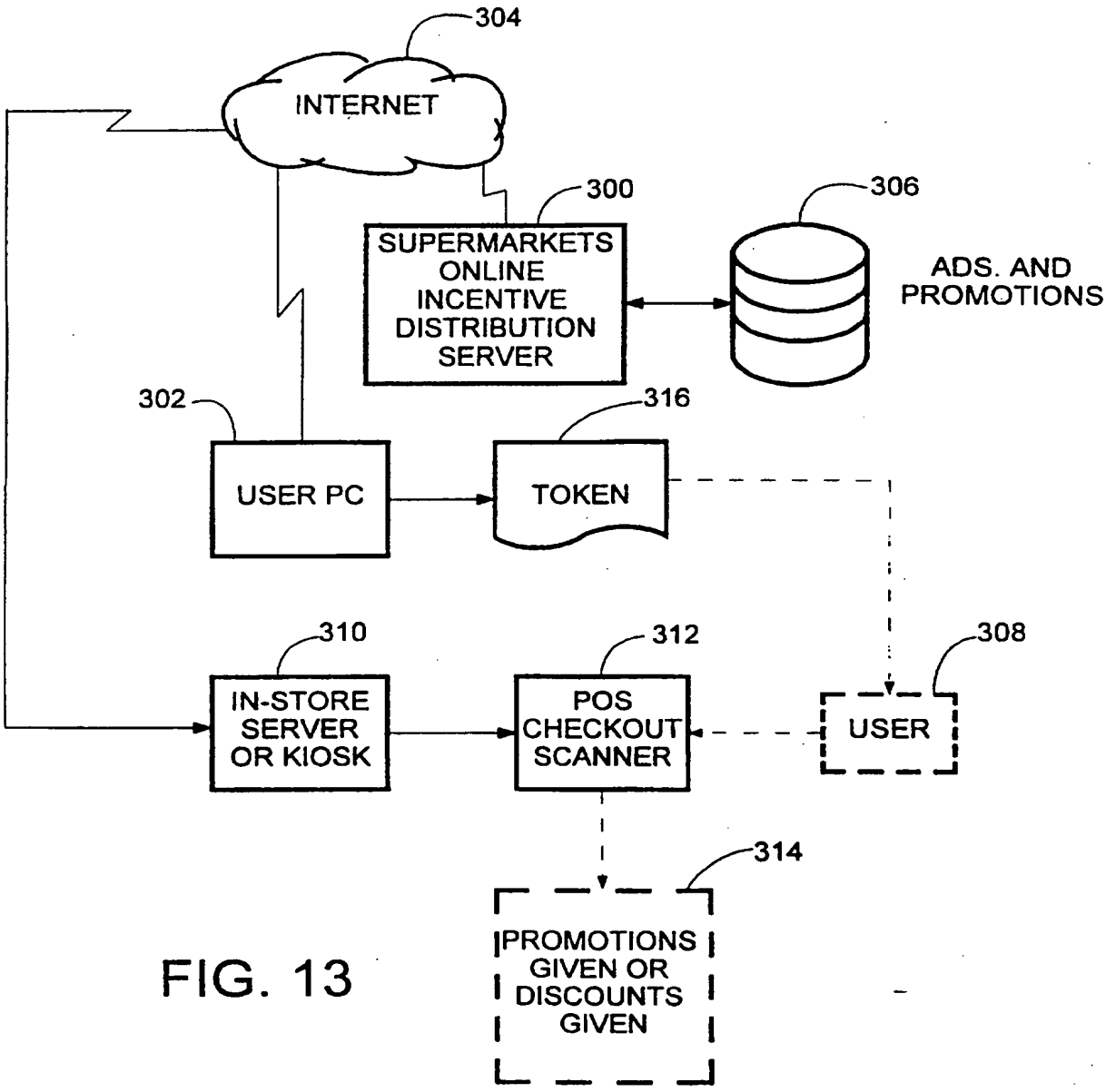

304
INTERNET
300
306
SUPERMARKETS ONLINE INCENTIVE DISTRIBUTION SERVER
ADS. AND PROMOTIONS
302
316
USER PC
TOKEN
310
312
308
IN-STORE SERVER OR KIOSK
POS CHECKOUT SCANNER
USER
314
PROMOTIONS GIVEN OR DISCOUNTS GIVEN

FIG. 13

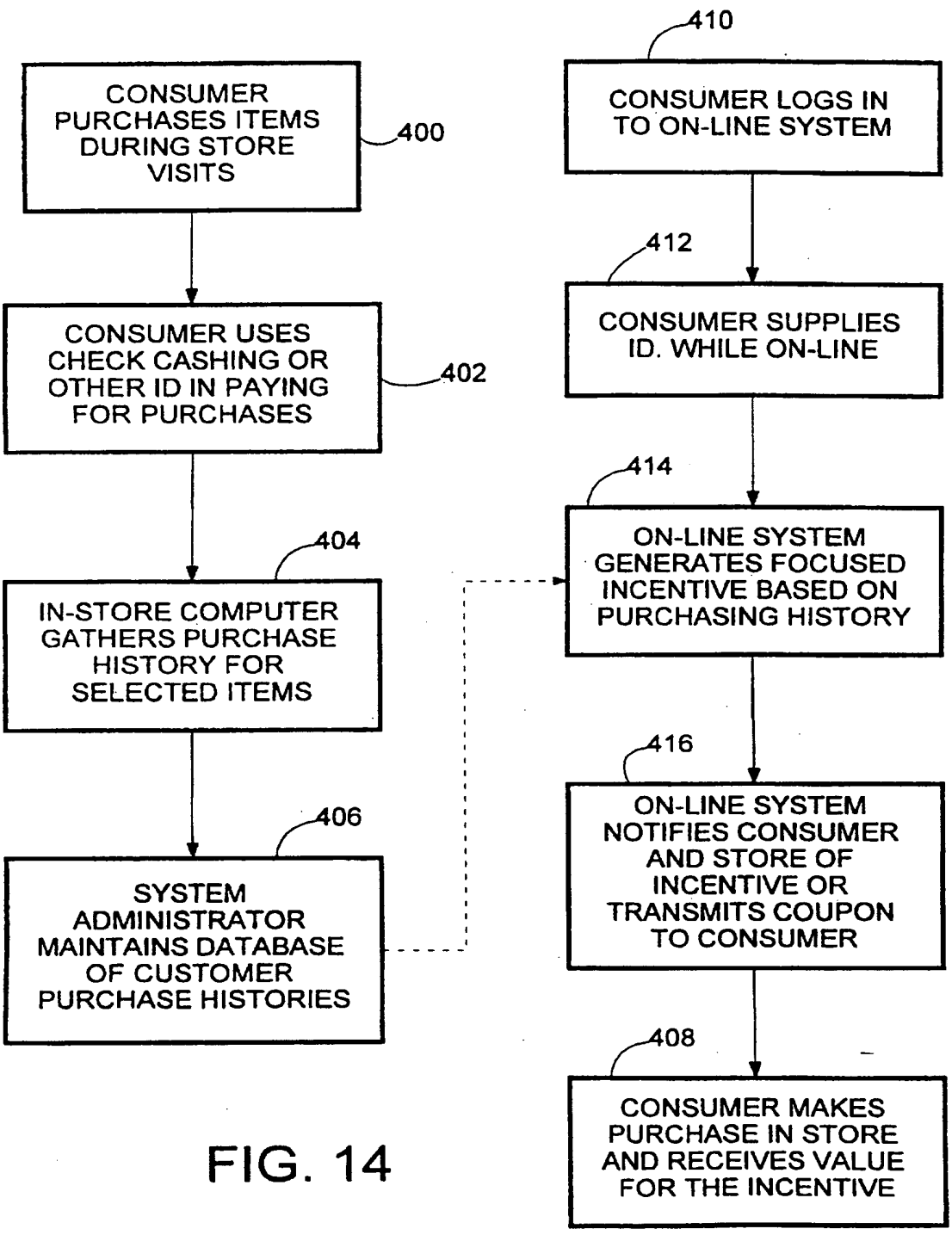

CONSUMER PURCHASES ITEMS DURING STORE VISITS
400
CONSUMER USES CHECK CASHING OR OTHER ID IN PAYING FOR PURCHASES
402
IN-STORE COMPUTER GATHERS PURCHASE HISTORY FOR SELECTED ITEMS
404
SYSTEM ADMINISTRATOR MAINTAINS DATABASE OF CUSTOMER PURCHASE HISTORIES
406
CONSUMER LOGS IN TO ON-LINE SYSTEM
410
CONSUMER SUPPLIES ID. WHILE ON-LINE
412
ON-LINE SYSTEM GENERATES FOCUSED INCENTIVE BASED ON PURCHASING HISTORY
414
ON-LINE SYSTEM NOTIFIES CONSUMER AND STORE OF INCENTIVE OR TRANSMITS COUPON TO CONSUMER
416
CONSUMER MAKES PURCHASE IN STORE AND RECEIVES VALUE FOR THE INCENTIVE
408

FIG. 14

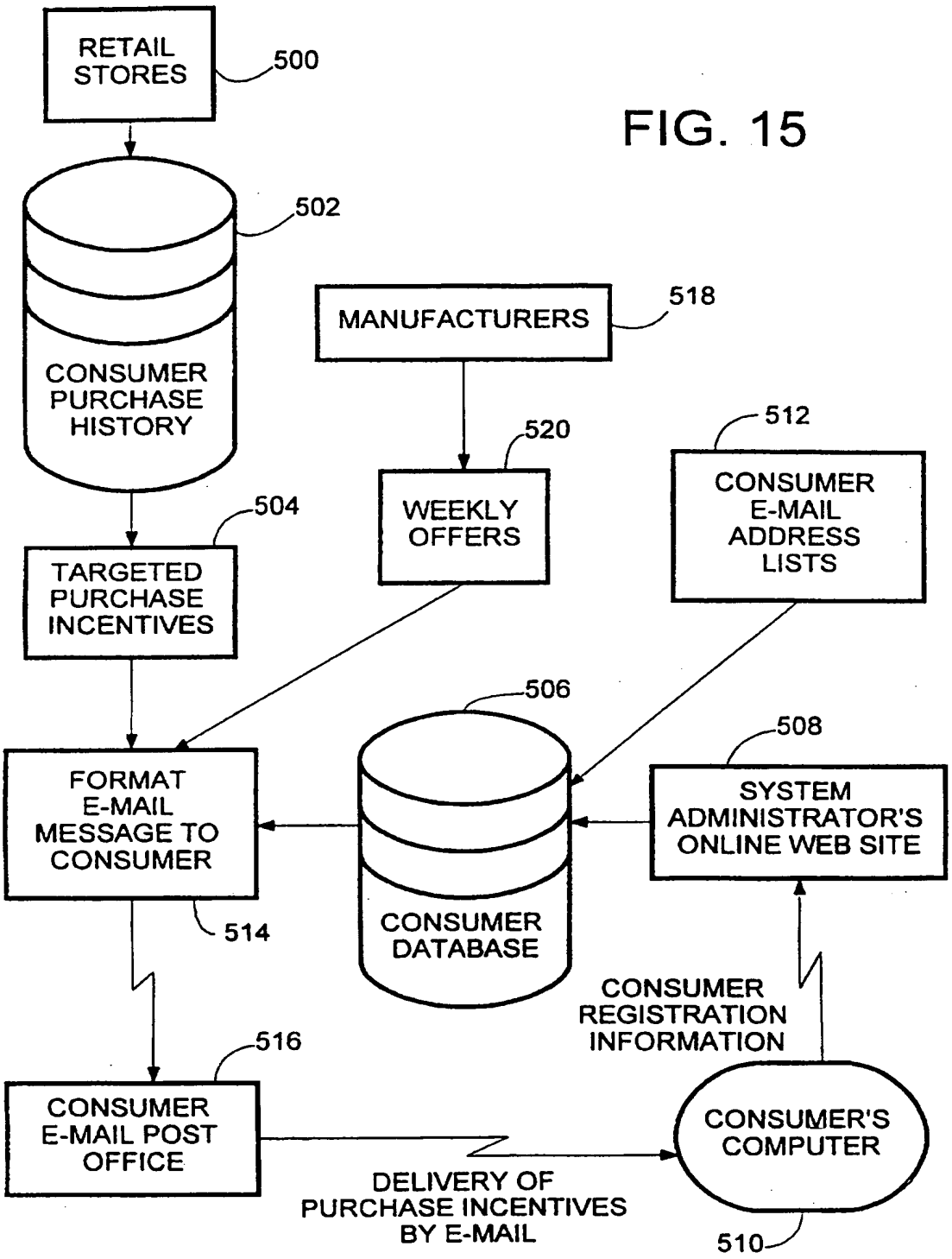

RETAIL STORES
500
502
CONSUMER PURCHASE HISTORY
MANUFACTURERS
518
520
WEEKLY OFFERS
512
CONSUMER E-MAIL ADDRESS LISTS
504
TARGETED PURCHASE INCENTIVES
506
508
FORMAT E-MAIL MESSAGE TO CONSUMER
SYSTEM ADMINISTRATOR'S ONLINE WEB SITE
CONSUMER DATABASE
514
CONSUMER REGISTRATION INFORMATION
516
CONSUMER E-MAIL POST OFFICE
CONSUMER'S COMPUTER
DELIVERY OF PURCHASE INCENTIVES BY E-MAIL
510

FIG. 15

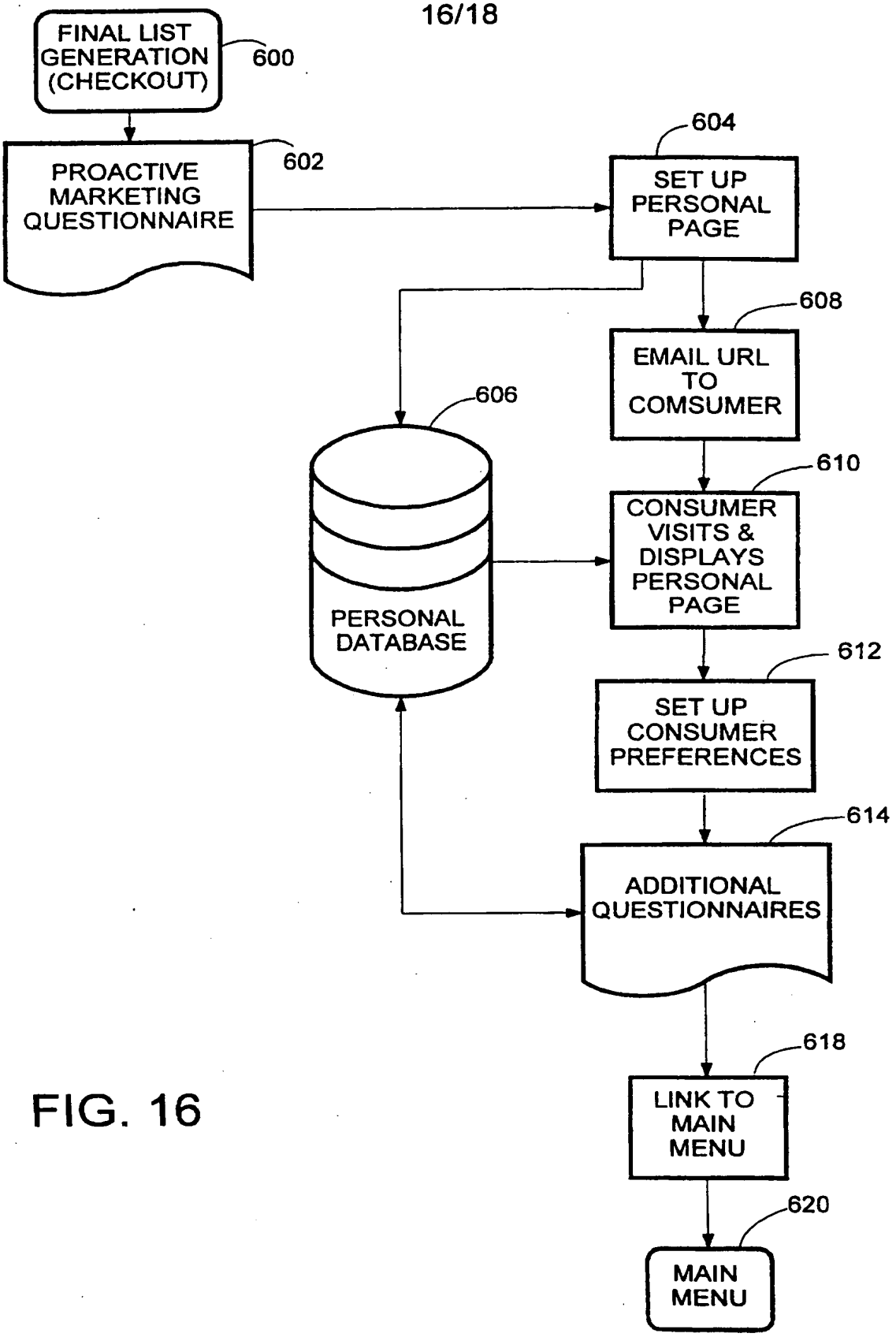

FINAL LIST GENERATION (CHECKOUT)
600
PROACTIVE MARKETING QUESTIONNAIRE
602
604
SET UP PERSONAL PAGE
608
EMAIL URL TO COMSUMER
606
PERSONAL DATABASE
610
CONSUMER VISITS & DISPLAYS PERSONAL PAGE
612
SET UP CONSUMER PREFERENCES
614
ADDITIONAL QUESTIONNAIRES
618
LINK TO MAIN MENU
620
MAIN MENU

FIG. 16

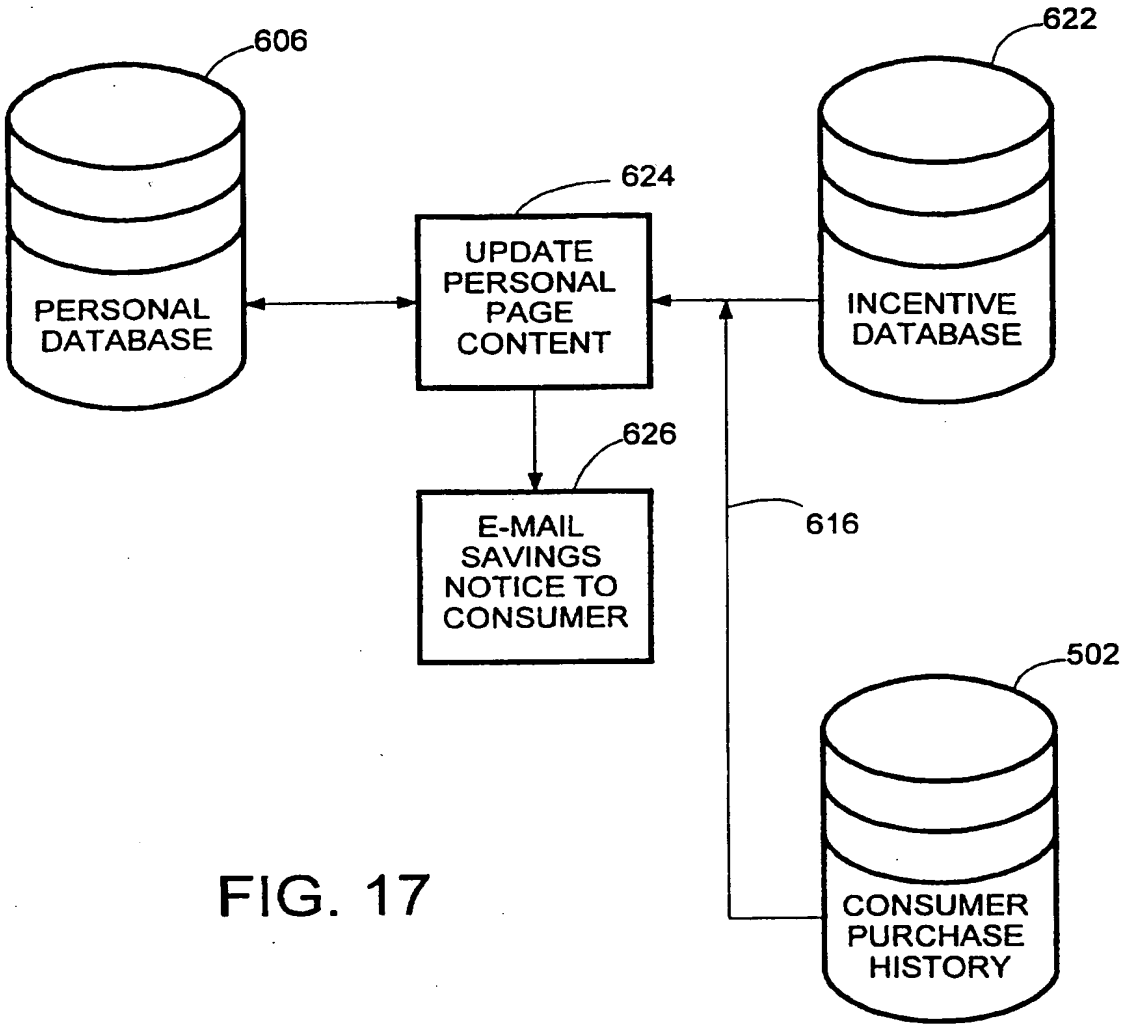

606
622
624
PERSONAL DATABASE
UPDATE PERSONAL PAGE CONTENT
INCENTIVE DATABASE
626
E-MAIL SAVINGS NOTICE TO CONSUMER
616
502
CONSUMER PURCHASE HISTORY

FIG. 17

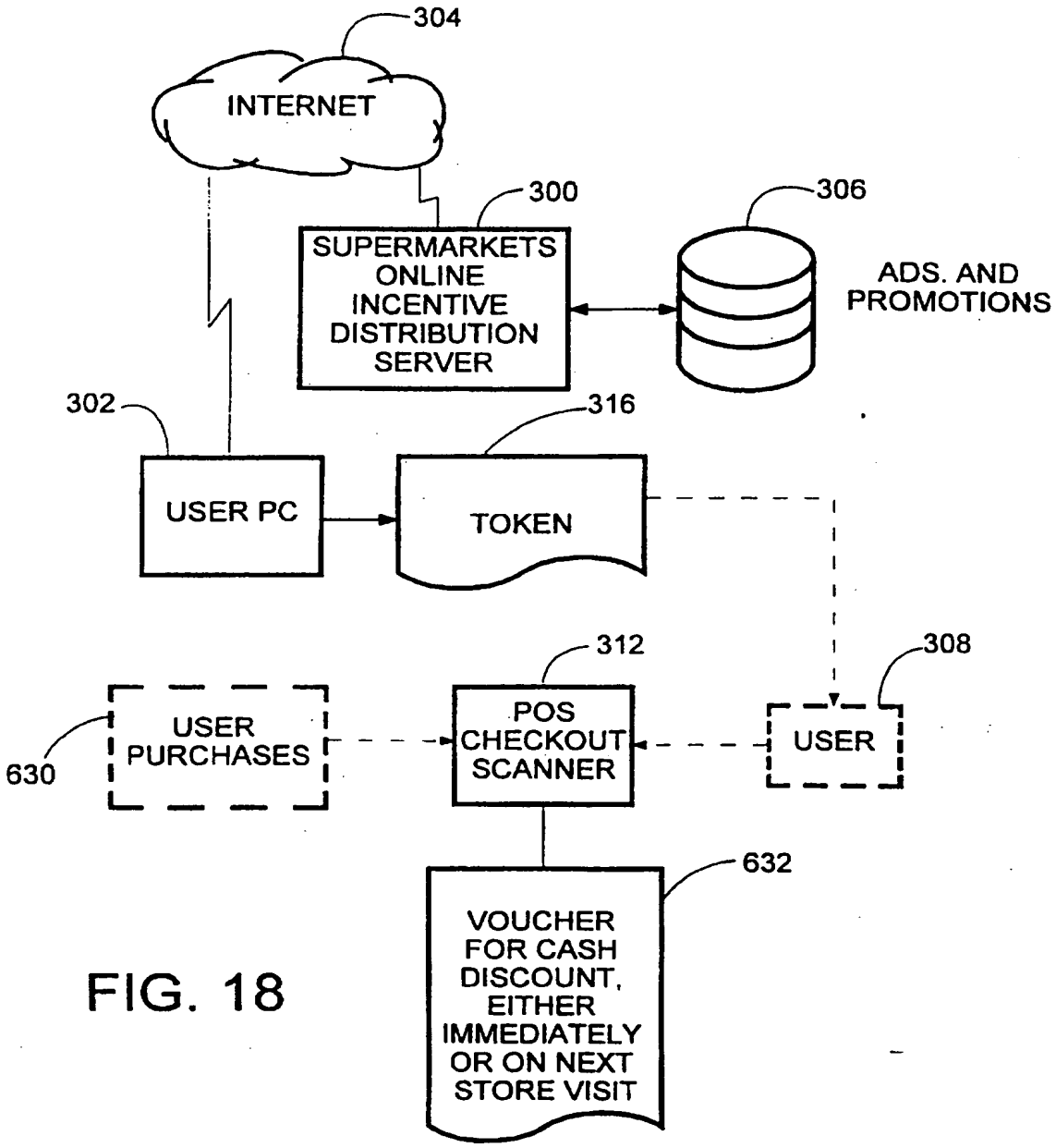

304
INTERNET
300
306
SUPERMARKETS ONLINE INCENTIVE DISTRIBUTION SERVER
ADS. AND PROMOTIONS
302
316
USER PC
TOKEN
312
308
630
USER PURCHASES
POS CHECKOUT SCANNER
USER
632
VOUCHER FOR CASH DISCOUNT, EITHER IMMEDIATELY OR ON NEXT STORE VISIT

FIG. 18

INTERNATIONAL SEARCH REPORT

Interr ial Application No
PCT/US 96/20497

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 347 632 A (FILEPP ROBERT ET AL) 13 September 1994 see abstract; figures 1,2 see column 2, line 20 - column 3, line 35 see column 91, line 14 - column 93, line 43 ---	1-31
A	US 4 949 256 A (HUMBLE DAVID R) 14 August 1990 see abstract ---	21
A	WO 95 16971 A (OPEN MARKET INC) 22 June 1995 see abstract; claims 1,4; figures 1-5 see page 5, line 34 - page 6, line 4 see page 9, line 19 - page 9, line 30; figure 3 --- -/--	1,11,15, 23,24, 28,29

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

1

Date of the actual completion of the international search	Date of mailing of the international search report
21 March 1997	4. 04. 97

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+ 31-70) 340-3016	Suendermann, R

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Inter nal Application No
PCT/US 96/20497

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5347632 A	13-09-94	US 5594910 A	14-01-97
		US 5442771 A	15-08-95
		CA 1337132 A	26-09-95
		CA 1338423 A	25-06-96
US 4949256 A	14-08-90	NONE	
WO 9516971 A	22-06-95	EP 0734556 A	02-10-96
		JP 9500470 T	14-01-97
WO 9315466 A	05-08-93	CA 2127698 A	05-08-93
		EP 0624268 A	17-11-94
		JP 7505028 T	01-06-95